LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

AVOIDING 'NEGLIGENCE AND PROFUSION': THE OWNERSHIP AND ORGANISATION OF ANGLO-INDIAN TRADING FIRMS, 1813 TO 1870.

MICHAEL ALDOUS

A THESIS SUBMITTED TO THE DEPARTMENT OF ECONOMIC HISTORY OF THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE FOR THE DEGREE OF DOCTOR OF PHILOSOPHY, LONDON, JUNE 2015

Declaration

I certify that the thesis I have presented for examination for the PhD degree of the London School of Economics and Political Science is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it).

I declare that my thesis consists of 102057 words.

Abstract

Debates in business and economic history have focused on the role played by business ownership and organisational forms on the performance of firms, industries and economies. Alfred Chandler asserted that it was the adoption of hierarchical managerial structures and joint-stock ownership which enabled an unprecedented expansion of the scale of business in the late 19th century. This argument is widely debated and a growing literature has looked at the role played by different forms of business organisation, such as the partnership and cooperative, in enabling economic growth.

This thesis contributes to these debates through an investigation of Anglo-Indian trading firms between 1813 and 1870. A new data-set of firms operating in Calcutta identified the use of various business forms to conduct trade. In this period the number of trading partnerships increased from 24 to 88, whilst the number of joint-stock firms expanded from a handful in the years before 1850 to over 170 by 1868. In the decade after 1858 the number of hybrid managing agency firms tripled, whilst the number of firms using agents grew from 57 to 183.

Drawing on the 'analytic narratives' method a novel analysis using transaction cost and agency theories is made of four firm case studies. This analysis reveals that changes in the economic environment altered the transactions undertaken by the firms and incentivised the adoption of different forms of ownership. In turn, the internal organisation of the firms adapted to mitigate costs of agency caused by changes in ownership.

These findings show that entrepreneurs sought adaptive organisational solutions to balance an evolving set of trade-offs between transaction and agency costs. Key to this process was the capacity of the partnership form to reduce the costs of agency incurred by firms operating with geographically distant actors. This resulted in the proliferation of the managing agent form. These findings reinterpret existing explanations of the evolution of firms in the Anglo-Indian trade, showing that problems of managing agents at distance remained a key challenge throughout this period.

Acknowledgements

This thesis was made possible by the generous financial assistance of the Economic and Social Research Council, through the award of an ESRC Standard Research Studentship ES/J500070/1, and an Economic History Research Scholarship from the London School of Economics and Political Science. The members and students of the LSE Economic History department have been excellent colleagues, offering support and friendship. The Graduate seminar offered excellent opportunities to trial ideas and receive important feedback at different stages of the project.

To my supervisors, Gerben Bakker and Tirthankar Roy, I offer the most sincere thanks for the mentoring they have provided over the course of the PhD. Through their dedicated reading and constructive comments they helped me avoid numerous mistakes, whilst constantly challenging me to push my thinking further. They have taken the thesis in many new directions, and shaped my research and writing skills in countless ways. All remaining errors in the text are mine alone, and I hope that the thesis does in some small way reflect their own high standards of research.

My parents have been a constant source of encouragement and support and I dedicate this thesis to them. The spirit of inquiry, desire for knowledge and love of history that drove me to undertake the PhD were all fostered by them. To Joanna, my love, thanks for putting up with me in the last stages of writing up, I know it hasn't been much fun, and only someone with the patience of a saint could have seen this through.

Table of Contents

List of tables

List of figures

Glossary and abbreviations

Firms

Agency Houses. "The name 'agency house' originally implied nothing more than an establishment where business was done for another, so it was more or less synonymous with the more common name of 'commission house', and most firms in British India started as representatives of domestic merchants or manufacturers." Chapman, *Merchant Enterprise in Britain*, 107.

Managing Agents. "Enterprises were promoted and controlled by persons who belonged to what are known as Managing Agency firms," a system which originated from, "men who were first engaged in the general trading business, but soon turned their attention to other lines of activity." Lokanathan, *Industrial Organization in India,* 14-15.

East India Company (EIC). Granted a royal charter in 1600, the firm held a monopoly on all trade between Britain and India until 1813. The term 'servant' was used to describe the firm's managers.

Dutch East India Company (VOC). Established in 1602 the firm held a monopoly from the States General of the Netherlands to undertake trade with Asia.

John Palmer and Co. Palmer and Co. when referring to the firm, John Palmer when referring to the individual.

Gisborne and Co. Gisborne and Co. when referring to the firm, Matthew Gisborne when referring to the individual.

The Assam Company. Assam Co. when referring to the firm.

Ogilvy, Gillanders and Co. Gillanders and Co. when referring to the firm, Thomas Ogilvy and Gillanders when referring to the individuals.

Baring Brothers and Co. Barings when referring to the firm.

Weights, measures

Maund. A maund was a unit of weight that had various definitions around India. In this study the 'bazaar maund' has been used which was equated to around 83 lbs or 37.6 kg.

Chest. A chest was a measurement used to measure quantities of various imports. In the case of indigo it equated to around 3.5 maunds per chest, between 280 to 300 lbs or 127 to 136 kg.

Biggah/Bigha. A biggah was a unit of area, which like the maund had various interpretations around India. In west Bengal this was standardised by the British to equal a third of an English acre, or around 1335 square metres.

Poorah. A poorah was a unit of area, although also a measure of grain. As a unit of area it was equal to just over an English acre. An acre was 4046 square metres.

Currencies and exchange rates

Sicca/Sicar/Silver rupee (Rs.) and Annas (An.). Reference to Rupees in this thesis is always to Sicca, and later the Silver rupees. The Sicca was issued in Calcutta and replaced by the Silver rupee in 1836. There were 16 annas to a rupee.

Sterling (£) pounds, shilling (S.) and pence (D.). There were 20 shillings to the pound, and 12 pence to the shilling.

The exchange rate was generally stable at around 2s to 1 Rs. or £1 to Rs. 10 across the period of study.

Systems

Ryoti/raiyati. A production system common in indigo and other harvest crops prior to 1860, whereby peasants or ryots were contracted through systems of advances to grow and deliver produce such as indigo leaves to factory owners.

Zerat or nij. A production system increasingly common in indigo and other harvest crops after 1860, through which factory owners bought land and cultivated crops directly, employing peasants as wage labourers.

Zamindars were Indian land owners.

Banians were Indians hired by the European trading firms to manage their interactions in the local markets.

Archives and sources

Barings archive (BA), London.

Bodleian Library (BoD), Oxford.

British Library (BL), London.

Digital South Asia Library (DSAL), online resource maintained by the University of Chicago.

Glynne-Gladstone, Flintshire Records office (GG), Hawarden.

London Metropolitan archive (LMA), London.

Chapter 1 Introduction

"The directors of such [joint-stock] companies, however, being the managers of other people's money than their own, it cannot well be expected, that they should watch over it with the same anxious vigilance with which the partners in a private copartnery frequently watch over their own … negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company." (Adam Smith, 1787)[1]

The rescinding of the East India Company's (EIC) monopoly on trade between Britain and India in 1813 opened new opportunities for British trading firms. The volume and value of the Anglo-Indian trade grew and the range of products imported and exported became progressively more varied, enabling increased opportunities for specialisation and integration. The trading firms expanded their activities and integrated into manufacturing, transportation and construction of infrastructure, resulting in many becoming highly diversified organisations, particularly after 1850.

In the period from 1813 to 1870, different types of firm emerged to undertake the trade. Entrepreneurs utilised a range of ownership forms including the partnership, joint-stock and hybrid models. There was also a wide variation in organisational structures and governance mechanisms employed, ranging from integrated hierarchies to networks of firms and partners. Novel forms of firm organisation emerged such as the 'managing agency' which saw trading firms function as both investors and managers of manufacturing, mining and plantation operations.

The selection of ownership form became a significant choice for entrepreneurs in the mid-19th century after changes in legislation substantially lowered the costs of incorporation.[2] Entrepreneurs had to weigh up the pros and cons of different ownership and organisational forms

[1] Adam Smith, *An inquiry into the nature and causes of the wealth of nations* (Oxford University Press, 1998), 741.
[2] In Britain the passage of the Companies Act of 1844, the Limited Liability Act of 1855 and the Joint-Stock Companies Act of 1856 all lowered the costs of incorporation. In India, similar acts were passed in 1850 and 1857.

that would best enable them to carry out their various activities. They experimented with different forms to better maximise opportunities and overcome the constraints they faced as the economic and business environment developed in both Britain and India.

The use of a range of firm types in this period opens a number of questions that this thesis explores:

I. How did the ownership, organisational structures and governance arrangements of Anglo-Indian trading firms change between 1813 and 1870, and did one or other form proliferate?
II. Why were certain forms of ownership and organisation preferred, and which factors determined an entrepreneur's choice of form?
III. Did the choice of ownership and governance affect the performance of the firms?

Authors including Chapman and Jones have analysed changes in these firms over this period. They described an evolutionary transformation from small partnerships, conducting a wide range of trading activities, to diversified managing agents.[3] The key factors that affected the decisions regarding ownership and organisation were identified as access to credit, capital, and managerial talent, whilst the capacity to diversify risk but allow the retention of control and capacity to extract profits by small numbers of owners was also important. The managing agents' capacity to solve these challenges saw them come to dominate the organisation of Indian industry by the beginning of the 20th century.[4]

These questions continue to be central to major debates in economic and business history in which the roles of ownership and organisation are investigated as determinants of firm performance and economic development. Using an analytical framework drawn from the theory of the firm literature, the thesis reassesses the narrative of the Anglo-Indian trading firms and

[3] Stanley Chapman, *Merchant Enterprise in Britain: From the Industrial Revolution to World War I* (Cambridge University Press, 2004), and Geoffrey Jones, *Merchants to Multinationals, British trading companies in the 19th and 20th centuries* (Oxford University Press, 2000).
[4] Maria Misra, *Business, Race, and Politics in British India, c. 1850–1960* (Oxford University Press, 1999), 4, estimated that 75 per cent of all Indian industrial capital was controlled by managing agents in the early 20th century.

advances these debates.[5] Drawing on transaction and agency cost theory a different, although potentially complementary, reading of the development of the firms is proposed. The thesis shows that entrepreneurs experimented with different forms of business organisation that allowed them to lower the costs of transacting for credit, capital and information, whilst lowering the costs of controlling agents separated by distance and time.

1.1 Methodology and analysis

To answer these questions, the thesis uses a methodology influenced by the *Analytic narratives* approach proposed by Bates et al.[6] The method aims to explain historical phenomena using formal arguments drawn from social science theory. In this thesis the phenomenon to be explained is the change in business ownership and organisational form. A narrative of organisational change is constructed from four case studies representative of different firm types, and outcomes of the choice of form including profitability, survival and the contraction or proliferation of the type of firm are identified. Transaction and agency cost theory is drawn on to develop a number of propositions with which to analyse the narrative and examine the extent the theory can explain the outcomes of the narrative.

The use of this method attempts to balance the pedagogies and traditions of business history in its use of narrative and case study, whilst drawing upon economics and economic history in terms of theory and ex-ante identification of explanatory variables. This provides a robust method for systematically comparing the firms over time. More formalised econometric methods could also accomplish this, and have been used in various similar studies.[7] However, the availability of data to render a robust regression analysis or other form of statistical test is difficult to obtain for these firms.[8]

[5] These historical and theoretical debates are discussed in chapter 2.2.
[6] Robert Bates et al, *Analytic Narratives* (Princeton University Press, 1998). The method is discussed further in Chapter 2.9.
[7] Eric Hilt, "Incentives in corporations: evidence from the American whaling industry," *Journal of Law and Economics*, 49 (2006).
[8] The widespread use of the partnership form, for which there were no financial reporting requirements in this period, has left little systematized collection of data from these firms.

1.2 Periodization and boundaries of the study

The period of the study encompasses the rescinding of the EIC monopoly in India (1813), through to the opening of the Suez Canal and completion of the London to Calcutta telegraph line in 1870. In this period trade expanded, but was volatile, punctuated by credit crises in Calcutta in the early 1830s and in 1847. Changes in legislation in the 1850s significantly enhanced the benefits of the joint-stock form and made incorporation easier. The period of study ends in 1870 when changes in transport and communication dramatically altered the business environment. Chapman and Jones have already provided detailed explanations of the transition of the trading firms due to these developments.[9] This thesis focuses on understanding the period prior to these changes.

The boundaries of the study are limited in several ways. The breadth of activities undertaken by the firms and the geographies they operated in was extensive. There were significant differences between the business environments in Calcutta and other centres such as Bombay, particularly regarding the role of local Indian merchants. To improve the analytical focus, the thesis concentrates on the British firms operating in Calcutta and on their activities between Britain and India. This improves the comparative analysis of the thesis by focusing on firms in a common environment.

Whilst accounting for changes in the institutional and business environment, the explanatory focus of the thesis is at the firm level. The broader economic environment in India was changing over these years and the India of 1870 was significantly different to the one encountered by entrepreneurs in 1813. However, a detailed account of these changes is not the aim and is beyond the scope of this study. Instead, a decision has been taken to focus on the firms' activities in two major export products: indigo and tea. India became the world's largest exporter of indigo by 1830 and many trading firms had some involvement in the trade. Likewise, tea production expanded after 1840, and a tea boom in the 1860s saw both existing firms and new entrants rush

[9] Chapman, *Merchant Enterprise*, Jones, *Merchants to Multinationals.*

into the market. A more detailed study of the products' production and marketing helps to identify the opportunities and constraints that firms faced in these markets, whilst accounting for the effects of changes in the broader institutional and economic environment.[10]

The limitations placed on the study through the methodology and these imposed boundaries create a trade-off between historical detail and depth in favour of sharper analysis of organisational change across the period. The thesis is not an exhaustive description of either the firms' activities or the environment in which they operated.

1.3 Identification and definition of the firms

The identification of the firms analysed in this thesis was undertaken through a survey of the secondary literature and a study of 19th century commercial directories. This sought to clarify the ecology and types of firms operating in the Anglo-Indian trade but, as Jones notes, providing a clear definition of them is complicated.[11] The commercial directories categorised merchant firms and agents, but little distinction was made between them. Chapman defined merchants as, "taken to be entrepreneurs engaged in foreign (overseas) commerce as wholesale traders."[12] Yet as Jones notes, there were major differences between a merchant trading on his own account and an agent or factor acting solely as an intermediary for others.

The firms often used networks of associates and partners, linked through formal and informal mechanisms. The locus of control and power in these firms could either be in Britain or abroad.[13] The extent to which a firm was a discrete entity or part of a wider body is often hard to distinguish. This becomes especially complicated when defining the managing agents, independent entities that controlled other firms through contracts. Defining the boundaries, activities and organisation of the trading firms to obtain a neat taxonomy is problematic.

[10] This analysis is undertaken through commodity chain analysis as proposed by Terrence Hopkins & Immanuel Wallerstein, "Commodity chains in the world economy," *Review*, 10, 1 (1986). The implementation is discussed in chapter 2.9.
[11] Jones, *Merchants to Multinationals*, 1.
[12] Chapman, *Merchant Enterprise*, 3.
[13] Jones, *Merchants to Multinationals*, 44.

In this study, an attempt has been made to classify these trading firms both typologically and chronologically and four distinct types have been identified. First, the agency houses active as the monopoly was rescinded. Second, the trading firms that emerged after the financial crisis in Calcutta in the 1830s. Third, the managing agents that became prominent from the 1850s onwards. These were all organised as partnerships prior to 1870. The final type to be analysed were firms that integrated production and marketing processes. These were increasingly organised as joint-stock firms, incorporated in Calcutta and London.[14] As the purpose of this thesis is to look at the different ways in which firms adapted to the economic environment in Bengal, rather than to focus solely on trading firms per se, other modes of firm organisation provide an interesting point of comparison. This is a rather artificial distinction but enables analysis of change between the types.

1.4 Selection of case studies and sampling issues

Corresponding case studies of the four types needed to be selected. From the commercial registers a number of firms with archival records were identified, of which various were rejected. For example, Harrison and Crosfields, a significant managing agent of the late 19th century, was predominantly a UK based tea importer in this period. Mackinnon and Mackenzie was founded in 1848 but only expanded its operations into India after 1870, as was the case with James Finlay.[15]

Four firms were identified. John Palmer and Co. was founded before 1813 and is investigated as an example of the agency houses. Gisborne and Co., founded in 1830, was a trading firm that emerged after the collapse of the principal agency houses. Ogilvy, Gillanders and Co. was established in 1826 as a trading firm but evolved into a managing agency in the years after 1840. The Assam Company was incorporated in 1839 for the purpose of producing tea. Table 1

---

[14] These firms bear resemblance to the Free-Standing Companies analysed by Mira Wilkins & Harn Schröter eds. *The Free-Standing company in the world economy, 1830 to 1996* (Oxford University Press, 1998).

[15] Each of these firms has been investigated in Chapman, *Merchant Enterprise,* and Jones, *Merchants to Multinationals,* but do not fit the periodization of this thesis.

provides an overview of the selected cases, indicating their dates of operation, main activities, and ownership form.

Various problems with these selections need to be acknowledged. The extent to which the firms are representative of the wider firm population can be questioned. These are not randomly selected representative 'sample' firms, but rather specifically chosen cases determined by the firms characteristics and availability of sources. Most trading firms from this period with archival records were successful with greater longevity than their contemporaries. The issue of survivor bias is prevalent, and the firms could prove unrepresentative of their type in many different ways; significant differences in scale and scope are certainly a possibility. However, acknowledging these limitations, the thesis does not seek to claim that each case is representative of an average firm, but rather analysis of these quasi-unique firms reveals the response of entrepreneurs to evolving market dynamics and the influence that these firms exerted in shaping the organisation of the markets and wider firm population.[16]

[16] Gerben Bakker, 'Selling French films on Foreign Markets: The International Strategy of a Medium-Sized Company.' *Enterprise and Society* 5, no. 1 (2004), discusses the methodological limitations of such case studies, whilst showing the inferences that can be achieved from analysis of such quasi-unique cases.

Table 1. The four selected case studies

Firm	Dates of Operation	Type of Firm	Main Activities	Sources
John Palmer and Co.	1790 - 1830	Partnership, Agency house.	Various banking and trade, including indigo.	Bodleian Library, Oxford
Gisborne and Co.	1830 – 1890s	Partnership, Trading firm.	Import of British manufactured goods and export of indigo.	Baring Brothers Archive, London
Ogilvy, Gillanders and Co.	1824 – 1970	Hybrid, partnership managing joint-stock. Managing agent.	General trade and managing agents for tea firms.	Flintshire Records Office, Wales
The Assam Company	1839 - 1953	Joint-Stock, integrated producer and importer.	Tea production and sales.	London Metropolitan Archives

Care, though, should be taken in making generalizable claims based on these individual cases. The exceptionalism of the individual firms, and the location of their activities in a discrete environment, limits the scope for making wider claims from the findings. By using multiple cases, and improving the taxonomy and quantification of the firm population, the thesis seeks to ameliorate some of the problems and limitations of the individual case studies.

1.5 Data and sources

Of the selected cases, three have been the subject of specific firm histories. John Gladstone, head partner of Ogilvy, Gillanders and Co., wrote a history of the firm in 1910 that was privately published. Likewise, the Assam Company commissioned a history published in 1957. Most recently, Webster has written a biography of John Palmer and the firm Palmer and Co.[17]

[17] Glynne-Gladstone (GG) 2749, John Gladstone, *The History of Gillanders, Arbuthnot and Co. and Ogilvy, Gillanders and Co.* (Waterlow and Sons ltd, 1910). H.Antrobus, *The History of the Assam Company 1839–1953* (Constable Ltd, Edinburgh, 1957). Anthony Webster, *The Richest East India Merchant, the life and business of John Palmer of Calcutta 1767–1836* (Boydell and Brewer, 2007).

Gisborne and Co. has not been subject to a specific history, although it was briefly discussed by Chapman. These studies are widely referenced throughout the thesis.

The thesis draws on numerous primary sources. In particular, correspondence and journals for each of the firms are available. The sources are most limited for Palmer and Co.; only John Palmer's personal letter books remain. In the case of Gisborne and Co., the sources are entirely made up of correspondence between the partners and their bankers, Baring Brothers and Co. Gillanders and Co. has a wider range of sources with a collection of letters and account books. Finally, the Assam Co., as an incorporated firm that survived into the 20th century, has good sources due to the reporting requirements and documentation from Annual General Meetings (AGM). There are gaps, inconsistencies and inaccuracies in all the sources, yet the correspondence remains the most fruitful source for understanding the actions of the actors in organising the firms.

Limited accounting information such as capital statements and annual accounts are available for each firm. What is available varies; for example, Gisborne and Co. has no accounting information from within the firm, but there are the ledgers of its accounts with Barings. Gillanders and Co. has some accounts for this period, particularly after 1860, although these are often simple balance sheets and profit and loss accounts. For Palmer and Co. almost no financial data survives with the exception of its bankruptcy schedules. The Assam Co. is, again, most complete with annual accounting reports and other data such as share prices available. In total, this is rather fragmentary, but does provide information on operations and some grasp of the firms' performance.

There are several other sources used in the study. Commercial registers provide a range of details including lists of different types of firms operating in Calcutta, the names of the partners and managers working for them, and other details such as nominal capital for joint-stock companies.[18] There are inconsistencies in the collation of the registers over time and omissions

[18] British Library (BL) OIR 954.14 ST 1216 CH, Bengal Annual Register and Directory series.

which leave them incomplete, but they remain the only source that provides listings of both the partnership and joint-stock firms in Bengal.

The Barings archive contains a significant collection of 19th century business statistics collated by the firm. There is data relating to prices and production for numerous products. These come from both published and private sources collected by the partners. Finally, the thesis draws on a number of British parliamentary select committee reports discussing the development of trade and industry in Asia. They contain interviews and statistics related to the activities of the firms.[19] The incomplete nature of the sources does present problems for the analysis, yet there is a breadth that allows for gaps to be addressed.

1.6 Motivation and contributions

The thesis builds on the existing historical literature of the Anglo-Indian trading firms and more general histories of trading firms in the 19th century. Previous studies have tended to focus on individual firms or firm types, and limited the period of study prior to 1830 or after 1850.[20] Extending the period of study and comparing a range of firm types improves analysis of their changing operations between 1813 and 1870.

The use of new archival sources contributes to a superior quantification and description of the taxonomy and ecology of the firms in Calcutta. This reveals that the number of trading partnerships increased from 24 to 88 across the period, with increasing diversification in the scale and organisation of these firms in the years after 1830. The number of joint-stock firms increased from a handful in the years before 1850 to over 170 in 1868, with 70 registered in the tea industry. However, by the early 1860s, the number of firms providing managing agency services had tripled, whilst the number of firms using agents had increased from 57 to 183 in the decade after 1858, of which nearly half were joint-stock firms.

[19] Parliamentary inquiries included, House of Commons Report (HC) 690 1833 Report from the Parliamentary Select Committee on Manufactures, Commerce, and Shipping, and HC 72-2 1861 East India Indigo Commission, papers related to indigo cultivation in Bengal.
[20] These studies are discussed in a historiography of the Anglo-Indian trading firms in chapter 2.3–2.6.

The use of the theory of the firm as an analytical framework for this study provides a new interpretation of the change between the firm types. Investigation of the indigo and tea markets reveals the challenges caused by the volatility of indigo production and increasing capital requirements to produce tea. Transaction cost analysis showed that firms adapted their form to mitigate threats of hold-up due to the increased asset specificity of investments. This resulted in widespread integration into production by the trading firms, and adoption of the joint-stock form. These changes, however, caused agency costs to shift, with the threats of opportunism caused by the separation of owners and managers, encouraging owners to appoint managing agents to lower these costs.

Analysis of the external and internal pressures shows that entrepreneurs experimented with forms of ownership, organisation and governance to overcome evolving sets of problems as industry conditions changed. The efforts to find a business form that balanced transaction and agency costs resulted in the widespread adoption of the innovative managing agent form. These findings contribute to debates on the use of transaction cost theory as a tool of organisational analysis, clarifying that the effects of one set of costs cannot be understood without seeing the impact on the other. Analysis of the trade-offs created by these different costs potentially offers a dynamic analytical approach for future historical research into organisational choice.

These findings support the post-Chandlerian discourse in economic and business history, by highlighting the importance of hybrid business forms in enabling economic development. These findings reject the view that the development of firms was a dichotomous choice between business forms, with entrepreneurs adapting elements of the different forms to find solutions to diverse problems.

1.7 Organisation of the thesis

The thesis proceeds in three parts. The first details the historical and theoretical context in which the study is located. Chapter two is a historiography of the Anglo-Indian trading firms, and a more general discussion of the literature discussing the development of trading firms in the 19th century. This is linked to a review of the pertinent aspects of the theory of the firm literature and a discussion on the use of economic theory as a tool in historical study. The discussion is used to identify analytical frameworks and propositions from transaction cost and agency theory with which to analyse the narrative.

The second part deals with the period between 1813 and 1850. Chapter three discusses the slow take-off and volatile trade conditions in Calcutta in the first half of the 19th century. This is followed by analysis of the indigo sector, using data on production, prices, imports, and exports, to describe the characteristics of the market. A commodity chain identifies the main transactions undertaken by the different actors. The taxonomy of the firms undertaking the trade is analysed through the data-set drawn from the Calcutta commercial registers. This provides the context to examine the two case studies, Palmer and Co. in chapter four, and Gisborne and Co. in Chapter five. These chapters examine the efforts of the firms to overcome the volatility of the indigo trade, and thin financial markets in Calcutta. These conditions encouraged experimentation with different structures of financing and different levels of integration of production.

The third part of the thesis details the rapid changes that occurred in the years between 1850 and 1870. Chapter six shows that the scale of the trade grew rapidly and new products, such as tea, rose to prominence. A commodity chain for tea reveals a different set of transactions to those encountered in indigo leading to the full integration of the operations. Meanwhile, changes in legislation had also made incorporation easier and more desirable. The data-set of commercial registers shows the growth in use of the joint-stock form, and its particular association with the tea sector. The final two case studies, the Assam Co. in chapter seven, and Gillanders and Co. in chapter eight, investigate the increasing use of the joint-stock form to enable expansion of industries with increasing capital intensity. The division of ownership and management did, however, dramatically increase the costs of agency, which managing agents such as Gillanders and Co. effectively reduced. Explanations of the transition between the four firm types and the implications for the various debates are discussed in the conclusion.

Chapter 2 Trading firms, history and the theory of the firm.

2.1 Introduction

The effect of business ownership and organisation on firm performance is widely-debated. Economics has tended to use theory to model the behaviour of firms in various conditions and predict the impact that change in organisation has on performance indicators such as profitability, return on investment and longevity. Business and economic historians have sought to explain change in business organisations over time, and the subsequent effects on the performance of firms, industries and economies. This has provoked various debates in both disciplines which have gradually intersected. The first part of this chapter details the chronological and thematic development of these debates, highlighting the main positions and points of intersection.

Anglo-Indian trading firms have featured prominently in a number of these debates. The EIC has been subject to extensive investigation, as have the managing agents. A review of the existing literature identifies the prominent arguments proposed to explain their emergence and development, and how different historiographies and methodologies have shaped these findings. This highlights a number of issues within the current explanations which are discussed in relation to wider historical debates around the development of firms in the 19th century.

The third part of the chapter discusses the various strands of theory known as the economic theory of the firm. This is an extensive literature so a selective review of the methods and analysis used in transaction and agency cost theory is presented. This highlights two frameworks that can be used as tools in historical study. From this theory and the historical literature propositions related to capital requirements, asset specificity, untimely dissolution, costs of information and the costs of controlling agents provide an analytical framework through which the narrative of the thesis is analysed.

2.2 Debates of markets, hierarchies, strategy and structure.

Thomas Mortimer, an 18th century political economist, thought that the joint-stock EIC, "brought the commerce and mercantile credit of Great Britain to such a degree of perfection …[that] to suppose that this national success could have been accomplished by private merchants, or even by companies not trading on a joint-stock, is an absurdity that does not deserve serious consideration."[21] He recognised that the scale of capital formation was a major enhancement over the partnership. His contemporary, Adam Smith, conversely, saw the dilemmas of the separation of ownership and management in the joint-stock company. The difficulty in aligning the interests of principals and agents ensured that, "negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company."[22]

By the end of the 18th century the effect that different forms of ownership had on the performance of both individual firms and the wider economy was a hotly debated issue. The use of the joint-stock form, by ventures such as the EIC, encouraged investigation into the benefits of incorporation as an alternative to the traditional partnership models.[23] There was, though, no defined research agenda in history or political economy to investigate business organisations.

Similarly neo-classical economists regarded the firm as a 'black box', a production function that converted inputs to outputs, determined by supply, demand and prices. Economists showed little interest in understanding the organisation of the firm itself. However, during the 1930s sustained research into the operations of firms emerged, although these early historians tended to limit their investigation to successful firms, and 'heroic' entrepreneurs.[24] Two works at this time did, though, open new perspectives for firm level investigation: Berle and Means systematically examined the impact of the division of ownership and management, whilst Coase looked at the

[21] Thomas Mortimer, *The elements of commerce, politics, and finance in three treatises on those important subjects* (1778), 130.
[22] Smith, *Wealth of nations*, 741.
[23] Ron Harris, *Industrializing English Law: Entrepreneurship and Business Organization, 1720-1844* (Cambridge University Press, 2000), details these debates and legislative changes in Britain.
[24] The emergence of Business history as a discrete discipline is usually attributed to the works of Norman Gras, and his series of case studies, the Harvard Studies in Business history. Norman Gras, *Casebook in American Business History* (F.S. Crofts and Co, 1939).

costs incurred through the interaction of firms with markets, as general factors that could affect firm and economic performance.[25]

Efforts to find generalizable explanations of firm development and performance found traction in the 1960s and 1970s through the work of Alfred Chandler. Using detailed industry studies and comparative cases, Chandler classified various organisational and managerial features that had allowed firms to achieve historically unprecedented scale and scope in the early 20th century.[26] Identification of organisational features that enabled growth became a major source of investigation, and the 'strategy and structure' debate became dominant in business history.[27]

Resonance with these debates was also found in theoretical economics in the 1970s. Building on Coase's thesis, investigation focused on where and why the boundaries between firms and markets developed. Economists sought to find at what point transactions were more efficiently carried out by markets or integrated within the hierarchy of a firm. Likewise, economists also found that the internal organisation of firms could be adjusted through governance and contracting arrangements to improve efficiency and productivity. The positive theory of agency and principal-agent theory developed to explain and model these arrangements. This approach has been labelled 'markets and hierarchies.'[28]

This has resulted in an increasingly systematic and formalised approach to investigate the organisation and performance of firms. The application of these theories to historical explanations of firms became increasingly popular in the 1980s and 1990s, through which a

---

[25] Adolf Berle and Gardiner Means, *The Modern Corporation and Private Property* (Harcourt, Brace & World, 1968), Ronald Coase's essay, "The Nature of the Firm" first published in 1937, reprinted in *The firm, the market and the law* (University of Chicago Press, 1988).
[26] Alfred Chandler, *Strategy and structure: Chapters in the History of the American Industrial Enterprise* (MIT Press Reprint, 1974), *The Visible Hand: Managerial Revolution in American Business* (Harvard University Press, 1977).
[27] The link between structure and strategy has been widely debated in Business history and contemporary Management studies. Recent focus has been on the effects on performance, see Ira Harris, and Timothy Rufeli, "The strategy/structure debate: an examination of the performance implications," *Journal of Management Studies,* 37, 4 (2000).
[28] The 'Markets and Hierarchies' label comes from Oliver Williamson's book, *Markets and hierarchies, analysis, antitrust implications* (Free Press, 1983).The value of this approach has been widely debated and led Lamoreaux et al. to call for researchers to go "beyond markets and hierarchies" in their explanation of firms. Naomi Lamoreaux, et al. "Beyond markets and hierarchies: Towards a new synthesis of American Business History," *American Historical Review* 108:2 (2003).

number of significant historical narratives emerged. In particular, the failure to adopt certain forms of ownership and organisation explained not only the poor performance of individual firms, but the stagnation of whole economies.[29]

The argument that large, hierarchically integrated firms, organised as corporations, was the superior form of business organisation became widely entrenched. Micklethwait and Wooldridge proclaimed, "The most important organisation in the world is the [joint-stock] company: the basis of the prosperity of the west and the best hope for the future of the rest of the world."[30] This attitude of triumphalism led many historical studies and much economic, institutional and legal analysis to become narrowly focused on understanding the conditions in which corporations evolved and analysing how the conditions can be replicated and improved.[31]

The whiggish nature of this approach, which reduced other business forms to poor substitutes, either waiting to be replaced or retardants of economic growth, has been critiqued. Jensen noted that "the dominance of the corporate form of organisation in large-scale, non-financial activities indicates that it is winning in this competition. Yet in spite of this relative success it is clear from the evidence of the last twenty five years that the corporation has failed in many ways as an organising device."[32] This conundrum has called forth a vast empirical literature exploring how the corporate form overcomes these problems.[33]

[29] Alfred Chandler, *Scale and Scope: Dynamics of Industrial Capitalism* (Harvard University Press, 1994), and William Lazonick, *Organisation and technology in capitalist development* (Edward Elgar Publishing, 1992), emphasised the failure of British entrepreneurs to professionalise management or adopt the joint-stock form as key factors in the decline of British economic fortunes in the late 19th and early 20th century.
[30] John Micklethwait & Adrian Wooldridge, *The company: A short history of a revolutionary idea* (Modern Library, 2005), xv.
[31] This literature is broadly categorised as the 'Law and Finance' school, examples include: Margaret M. Blair, "Locking in Capital: What Corporate Law Achieved for Business Organizers in the Nineteenth Century," *UCLA Law Review,* 51 (2003), Henry Hansmann and Reinier Kraakman, "The Essential Role of Organizational Law," *Yale Law Journal,* 110 (2000), Rafael La Porta et al, "Investor Protection and Corporate Governance," *Journal of Financial Economics* (2000).
[32] Michael Jensen, *Theory of the firm Governance, Residual Claims, and Organisational forms* (Harvard University Press, Cambridge, 2000), 3.
[33] Paul Frentrop, *Corporate governance 1602-2002* (Prometheus, Amsterdam, 2002), Jean Tirole, "Corporate Governance," *Econometrica,* 69 (2001).

Historians have also questioned the extent to which the corporation did 'win the competition.'[34] Lamoreaux and Rosenthal have asked why, when the joint-stock form was available, entrepreneurs would make the mistake of choosing another form of organisation?[35] Authors including Guinnane and Hilt have shown the historical failure of joint-stock firms in certain industries and revealed that inherent organisational problems proved intractable in certain circumstances.[36] This has led to an extensive reinvestigation of the timing, conditions and rationale for the rise of the corporate form.[37]

This strand of literature questions the claims that the failure to adopt the joint-stock hierarchical model retarded the successful development of business organisations. Economic historians have demonstrated the capabilities of business forms such as the cooperative and partnership to resolve problems that the joint-stock form was incapable of.[38] Established narratives such as the failure of British entrepreneurship in the late 19th century have also been challenged. Jones rejected the notion of British firms as antiquated, small-scale, family ventures unwilling to grow by embracing the joint-stock form, instead showing them as innovative entrepreneurs responding to specific market conditions.[39]

These debates have opened a rich seam of opportunity for both historians and economists. There is no consensus on a historically or theoretically optimal firm type and contemporary debate has raged around the role of the corporation.[40] Why different forms emerge, and the effect this has

---

[34] Leslie Hannah, "Marshall's 'Trees' and the Global 'Forest': Were Giant Redwoods Different?" in *Learning by doing in markets, firms, and countries,* edited by Naomi Lamoreaux et al. (University of Chicago Press,1999).
[35] Naomi Lamoreaux & Jean-Laurent Rosenthal, "Contractual trade-offs and SMEs' choice of organizational form: a view from U.S. and French history, 1830-2000," *NBER Working Paper* 12455 (2006).
[36] Naomi Lamoreaux, Jean-Laurent Rosenthal, Timothy Guinanne, and Ron Harris. "Putting the Corporation in Its Place." *Enterprise and Society,* 8, 3 (2007), Hilt, "Incentives in corporations."
[37] Brian Cheffin, *Corporate ownership and control: British Business transformed* (Oxford University Press, 2008), James Foreman-Peck and Leslie Hannah, "Extreme divorce: the managerial revolution in UK companies before 1914," *Economic History Review*, 65, 4 (2012).
[38] Timothy Guinnane, "Cooperatives as Information Machines: German Rural Credit Cooperatives, 1883-1914," *The Journal of Economic History,* 61, 2 (2001), and Ingrid Henriksen, "Avoiding lock-in: Cooperative creameries in Denmark, 1882-1903," *European Review of Economic History*, 3 (1999).
[39] Jones, *Merchants to Multinationals.*
[40] Colin Meyer, *Firm Commitment: Why the corporation is failing us and how to restore trust in it* (Oxford University Press, 2013), neatly summarises the current debates on the failure of corporate governance.

on performance, remains an open question. Historical study offers extensive scope to improve understanding of the conditions in which different business forms emerge and how they perform. It offers the opportunity to improve understanding of the rationale by which entrepreneurs make choices and of the mechanisms through which change in ownership and organisational structures occurred.

2.3 The agency houses grow out of the shadows of the EIC

Investigation by historians of trade and empire into the EIC showed an economic system in India shaped by the interaction between the British government's economic and political policies and the EIC's business operations.[41] The agency houses were first identified within the networks of financiers, politicians, and merchants in India at the beginning of the 19th century.[42] They were initially regarded as private trade partners of the EIC, described as growing "by the side of the government monopoly and under its wing."[43] Interest in the firms became more developed as authors sought to explain the structure of the markets, and the new political, economic and social networks that emerged after the rescinding of the monopoly in 1813.

Tripathi identified the expanding role of the firms within the financial system in British India that evolved as the EIC, provider of the majority of capital, credit, and remittance channels for the Anglo-Indian trade, withdrew from the market. The EIC continued to extract much of the available credit but made little effort to develop an adequate banking system to fill the gap created by its departure. Provision of credit and capital in the presidency cities of Calcutta,

---

41 Lucy Sutherland, *The East India Company in Eighteenth-Century Politics* (Oxford University Press, 1952), Huw Bowen, *The Business of Empire: The East India Company and Imperial Britain, 1756-1833* (Cambridge University Press, 2005), Sundipta Sen, *Empire of Free Trade: East Indian Company and the Making of the Colonial Marketplace* (University of Pennsylvania Press, 1998).

42 Furber Holden, *John Company at work* (Harvard University Press, 1948) found that reforms to the EIC in the late 18th century, banning servants from private trade, encouraged various members to quit and join the ranks of the private merchants. Tom Tomlinson, "The "Empire of Enterprise": Scottish Business Networks in Asian Trade, 1793-1810," *KIU Journal of Economics and Business Studies*, 8 (2001), Anthony Webster, *The twilight of the East India Company, The evolution of Anglo-Asian Commerce and Politics 1790-1860* (Boydell Press, 2009).

43 S.B.Singh, *European Agency Houses in Bengal 1783–1833* (Firma K.L Mukhopadhyay, Calcutta, 1966), 8.

Madras and Bombay was limited, with high rates for short term credit and problematic liquidity. Although the number of firms entering the trade increased, there was little input of new capital.[44]

The financial system in Calcutta explained the role and organisation of the agency houses and led them to develop two distinguishing characteristics. First, the need for local capital led the firms to accept savings deposits from EIC and local Indian sources.[45] Problems of local credit were resolved by borrowing from Indian money lenders, although some of the large agency houses also issued notes. Every agency house also had links with a firm in Britain to access cheaper short-term trade credit and longer-term capital for investment.[46] The capacity of the agency houses to draw on various sources of capital and credit left them in a unique position in India and was "the key to an agency house's growth and success."[47]

The second defining characteristic was the extensive role the firms played in the development of local industry. Due to their capacity to access relatively cheap capital in Britain and credit in India, the houses could funnel investments into emerging sectors such as indigo and sugar, through advances and long-term loans to factory owners. The firms were also heavily involved in developing the infrastructure and services of trade, often acting as agents for insurance and shipping firms and for transportation operations. Chapman believed that it was this function, "that marks them off from other mercantile enterprises … is that of heavy fixed capital investments in the locality of the overseas station."[48] Tripathi agreed, noting that, "experimentation with relatively unexplored lines of business was the most striking feature of the strategy the agency houses adopted."[49]

---

[44] Amales Tripathi, *Trade and Finance in the Bengal Presidency 1793-1833* (Oxford University Press, 1973), 121. The lack of capital and credit in Calcutta was exacerbated by the EIC and its policies. In 1813 the transfer of India's debt, increased military expenditure and cessation of bullion imports from Europe seriously strained the credit system in India.
[45] Chapman, *Merchant Enterprise,* 111.
[46] Dwijendra Tripathi, *The Oxford History of Indian Business*, (Oxford University Press, India, 2004), 46.
[47] Anthony Webster, "An early global business in a colonial context: The strategies, management and failure of John Palmer and co of Calcutta," *Enterprise and Society* (2005), 5.
[48] Chapman, *Merchant Enterprise,* 111.
[49] Tripathi, *Oxford History Indian Business*, 48.

Interest in the agency houses was initially confined to explanations of the development of the Indian and Asian economic systems, with little interest in understanding the firms as independent entities. A number of individual firm histories appeared in the 1950s, although these inclined towards hagiographic accounts of firm founders and partners, and it was difficult to generalize the findings.[50] Singh's account was part of the wider thrust to provide more systematic and analytical business histories which began to appear in the 1960s and 1970s.[51] He looked at the trade and investment strategies employed by the firms to better explain their development. In particular, he detailed the relationships that evolved through the credit systems that developed between the firms and indigo producers.[52]

Webster felt there was still a significant lack of understanding of the agency houses' internal management. His work on Palmer & Co. addressed the importance of the internal organisation and systems used to manage the firm's highly diversified operations. Of particular importance was the need to obtain and manage large amounts of information and intelligence on markets and products, leading to the development of a network of trusted sources. Webster believed the firm was organised to cultivate, "an international network of correspondents, many of them constituents, debtors or commercial allies, who had a vested interest in providing the firm with crucial intelligence."[53]

There is general agreement that the number of agency houses expanded in the early 19th century. Both Tripathi and Singh mention that there were 15 houses in Calcutta in 1790, which expanded to around 32 in 1830.[54] There was volatility in these numbers as firms failed and new entrants arrived, often from Liverpool and Glasgow. Webster estimated there was a fairly stable core of around 25 firms in the years after 1813.[55] Singh and others claim that of these firms there were

---

[50] Hilton Brown, *Parry's of Madras* (Published privately by Parry & Co, Madras, 1954), Gladstone, *History of Gillanders, Arbuthnot & Co,* H.Antrobus, *The History of the Assam Company 1839–1953* (Constable Ltd, Edinburgh, 1957) are indicative of these privately published works often produced to commemorate centenary celebrations.
[51] Singh, *European Agency Houses in Bengal*.
[52] Singh, *European Agency Houses in Bengal,* 8.
[53] Webster, *The Richest Merchant,* 62.
[54] Tripathi, *Oxford History Indian Business,* 47, and Singh, *European Agency Houses in Bengal,* 10.
[55] Webster, "An early global business in a colonial context," 102.

six principal houses that effectively formed an oligopoly, whilst smaller mercantile ventures scrambled to find a niche.[56]

The narrative of the agency houses traditionally ends in 1833 when the six principal firms failed.[57] The established explanation for their failure, again, focused on the problems of finance, as a contraction in liquidity brought on by an EIC loan issue and a downturn in the business environment in the late 1820s left the largest firms unable to cover their liabilities.[58] Webster, though, suggests that an expansion of activity overstretched Palmer and Co.'s organisational capacity leading to difficulties in maintaining the network and disruption of the vital flows of information and credit.[59] This phenomenon was mainly confined to Calcutta with firms of comparable scope such as Parry's and Co. of Madras and Forbes and Co. of Bombay remaining unscathed by the panic of 1833.[60]

The discussion of the houses' failures neatly encapsulates the prevailing approach to understanding the agency houses, and indeed other trading firms in the 19th century, in which a dichotomy between external and internal explanations has emerged. The early accounts tended to see the firms as instruments within the system of the EIC, primarily assessing them in the light of the colonial business environment, and ably demonstrating the external opportunities and obstacles faced by the firms. Yet more recent research, detailing the internal operations of the firms, has found different sets of factors to account for their expansion and failure.

[56] Singh, *European Agency Houses in Bengal*, 10-11, Tapan Raychaudhuri et al eds, *The Cambridge Economic History of India, vol. 2 1757–1970* (Cambridge University Press, 1983), 293–295.
[57] Singh, *European Agency Houses in Bengal,* ends in 1833, Tripathi, *Trade and Finance in the Bengal,* also finished in 1833, whilst Webster, *The Richest East India Merchant* ended in 1830 with the bankruptcy of John Palmer and Co.
[58] Singh, *European Agency Houses in Bengal,* 278–292, summarised this view. Whilst Benoy Chowdhury, *Growth of Commercial Agriculture in Bengal 1757–1900*, Vol 1 (Quality Printers and Binders Calcutta, 1964) noted that the houses' extensive investments in indigo factories further contributed to the credit crisis. The assets were highly illiquid, and the firms struggled to liquidate them as they sought to save themselves. They became almost worthless in the immediate aftermath.
[59] Webster, *The Richest Merchant,* chapter 3.
[60] Brown, *Parry's of Madras*, Tripathi, *The Oxford History of Indian Business,* 48–54.

2.4 The end of an era and new trading partnerships.

The collapse of the large agency firms marked the end of a narrative strand, and the literature has tended to ignore the period between 1833 and 1850, with interest returning after 1850 to focus on the rise of the managing agents.[61] What then came after the failure of the agency houses in 1833? Changes in the structure of the trade, particularly the growing value of British exports, influenced the organisation and financing of the firms. Chapman identified a move away from commission trade to own account trading.[62] In Britain, acceptance houses increasingly advanced money on manufacturers' invoices improving access to credit for merchants dealing in British exports.[63] Yet the problems with local credit in Calcutta persisted, as new banking initiatives such as the Union Bank had only limited scope and ability to meet the expanding needs of local industry.[64] This, according to Kling, led the firms in India to increasingly rely on the hypothecation of exported British goods for capital.[65]

Meanwhile, Tripathi claimed that, "the concept of commercial specialisation had not yet developed and there was a great deal of competition among them for the same business space," particularly in the indigo sector.[66] However, investigation of the large agency houses showed that, despite having diversified operations, they tended to have areas of concentration, which may have become more pronounced.[67] Roy also noted that specialist brokers and auctioneers such as William Moran and Co. improved the efficiency of the markets in Calcutta, offering

---

[61] Misra, *Business, Race, and Politics* and Jones, *Merchants to multinationals,* locate their analysis in the period after 1850.
[62] Chapman, *Merchant Enterprise,* 110, noted this trend with regards to Gisborne and Co. Yet, this runs counter to his wider analysis of British trading firms in the period where he found that by 1850 three quarters of trade was conducted via commission agents, as manufacturers retreated from direct marketing. Stanley Chapman, "British Marketing Enterprise: The Changing Roles of Merchants, Manufacturers, and Financiers, 1700-1860," *Business History Review* 53, 2 (1979).
[63] Chapman, "British Marketing Enterprise," credit was usually extended for up to twelve months on Indian consignments.
[64] Blair Kling, *Partner in Empire: Dwarkanath Tagore and the age of enterprise in Eastern India* (University of California Press, 1992), details the operations of the Union Bank.
[65] Blair Kling, "The Origin of the Managing Agency System in India," *The Journal of Asian Studies,* 26, 1 (1966).
[66] Tripathi, *Oxford History Indian Business,* 58.
[67] Tripathi, *Trade and Finance in the Bengal*, for example Fairlie and Co. owned the largest amount of shipping, whereas Palmer and Co. was most closely associated with indigo, and Alexander and Co. were pioneers in coal mining.

further opportunities for specialisation.[68] Chapman and Roy both suggest that these firms were financially weaker than their agency house predecessors, and many failed in the crisis of 1847.[69]

There is a strong possibility that these changes had significant implications for the financing and organisation of the trading firms, and that the operations and structure changed in the period after 1833. The shift from commission to own account trading would call for increased access to credit. If the firms evolved from undertaking highly-diversified activities to become more specialised, then the structure and management systems would be affected, particularly if the strategy and relationship towards producers and manufactures altered. Rather than a simple evolution towards the managing agents this may have been a more complicated period, and a deeper understanding of changes to the firms between 1833 and 1850 could provide a different interpretation of the factors shaping the transition towards the managing agency model.

2.5 The 'absurd, hated and pernicious principle' of managing agency

Of all the business forms that emerged in 19th century India the managing agents have been the most controversial. Rungta noted that, "from the [18] seventies onwards, the managing agency system became the most generally accepted way of running business corporations in the country."[70] Yet, in 1887 the Times of India labelled it the, "absurd, hated and pernicious principle of managing agency," and called for it to be abolished.[71] Understanding how and why this divisive system became entrenched, and analysing its effects on India's economic development, are questions central to a large literature. As with the study of the agency houses, contrasting readings of the managing agents' history have emerged.

Academic analysis of the firms was sparked by efforts to explain India's economic development in the first half of the 20th century. In the 1930s Lokanathan set out to explore the "structure and efficiency of industrial organisation India," and through this uncovered some "distinct and

---

[68] Tirthankar Roy, "Trading firms in Colonial India," *Business History Review,* 88, 1 (2014), 34.
[69] Chapman, "British Marketing Enterprise," 227. Roy, *Economic History of India,* 70.
[70] Rungta, *Business corporations in India,* 219-220.
[71] Ibid, Times of India 7th Jan 1887, 238.

almost unique features," in the promotion and organisation of industrial firms.[72] The key feature was the managing agent firm.

Capital was needed for industrial investment, and the joint-stock form was recognised as the most effective manner of enabling capital formation, yet sources of capital in India remained scarce. Lokanathan's analysis identified several key features of the managing agents' operations; these were the provision of managerial expertise as well as capital and credit to other firms. Their ability to overcome local capital constraints was due to their access to sources in Britain and Europe, which enabled investment into a variety of capital intensive industries that would otherwise have been under-capitalised and remained immature if reliant on local capital and expertise. Through their investment and management operations, the managing agents came to control large swathes of industrial activity.

Lokanathan believed these features made the firms an important element within India's future economic development. Others disagreed vehemently, believing the agents to be an exploitative form of organisation that retarded economic development.[73] The agents, organised as partnerships, promoted joint-stock ventures in which they took minority equity stakes, but retained control through a contract that gave them extensive decision-making rights in the promoted firm.[74] The contacts enabled the agents to extract profits and repress the interests of other shareholders. The extraction of profits restricted reinvestment, leaving firms struggling to achieve scale.

This disparity of views provoked a deeper interest in the form and historical investigation sought to better understand the managing agents' origins and rationale for their emergence. Kling

[72] Palamadai Samu Lokanathan, *Industrial organisation in India* (George Allen and Unwin, 1935), 8-13.
[73] Sohrab Davar, *Business organization and industrial management* (Progressive Corporation, 1969), showed how the managing agents were able to exploit weaknesses in Indian company law to enable practices prejudicial to the shareholders of the firms under management. These included the use of excessively long contracts with little scope for removing the agents, extraction of commissions on a range of unsuitable metrics, and using loans to extract further payments from the managed firms.
[74] Lokanathan, *Industrial organisation*. The agents often took small equity stakes but were able to control key managerial positions, take seats on the board of directors and obtain various powers of attorney through the contracts. The contracts were often signed for periods of ten years, with some being signed in perpetuity.

identified the operations of Carr, Tagore and Co. (Tagore and Co.) in the 1830s as the first such firm. Founded as an agency house, Tagore and Co. promoted and subsequently took over the management of various joint-stock firms in Calcutta. Kling claimed the firm adopted this unusual form due to a lack of available capital in the partnership needed to expand into new industries.[75]

Rungta noted that the lack of an investing class in India not only created a capital constraint, but also a cultural constriction. Indian merchants with capital to invest were not interested in new manufacturing industries as they were skilled in trade and banking. Instead, they sought reputable expertise provided by the agents to manage investments in these areas.[76] However, this meant that local managerial expertise remained scarce as few Indians gained experience in the new ventures. For Kling, "the agency house was the only subsystem in the economy with the capital, business experience and continuity to provide entrepreneurial and managerial talent."[77]

There was some historical support for Lokanathan's assertion that the managing agents acted as intermediaries for human and financial capital. In Calcutta they evolved from trading firms with established international networks and access to external stocks which they channelled to India. Due to experience garnered through their own operations, they had managerial capabilities adaptable to running ventures in new industries such as cotton, jute and tea. Kling claimed that by the 1850s this system had become an established form of business organisation.[78]

Lokanathan, though, pointed to different trajectories of development amongst the managing agents in each of the presidency cities and elsewhere in India.[79] The discrete economies of each region, driven by variation in emergent industries such as Cotton, and the involvement of local Indian interests, saw managing agents develop distinct features. The firms in Calcutta were

[75] Kling, "Origin of the managing agency," 37-47.
[76] Rungta, *Business corporations in India,* the trading firms had built experience in managing operations such as the indigo factories and similar ventures through their gradual integration into production.
[77] Kling, "Origin of the managing agency," 40.
[78] Ibid, 37.
[79] Lokanathan, *Industrial organisation*, pointed to some significant differences in the organisation and operation of the firms in Calcutta, Bombay and Ahmedabad, due to the industries in which they operated and the extent to which Indian capital and expertise was employed.

dominated by European partners and capital, unlike those in Bombay which had much greater links to Indian capital. There may also have been a difference in *modus operandi* and structure of the firms due to their origins. Roy delineated between managing agents that were 'born industrial' and those which had evolved from a career in trade.[80]

2.6 Managing agents, Joint-stock firms or Free-Standing Companies

Rungta, whilst accepting that market constraints in India had bought forth different forms of business organisation, asked why this should result in the proliferation of the managing agents. Why did joint-stock ventures struggle to exist as independent entities; why were agents tied to these ventures from their inception?[81] The lack of capital and management were clearly problems but not unique to India.[82] Rungta showed that whilst joint-stock firms proliferated in a number of industries including banking, transportation and tea, the form had failed to find great traction in India, restrictimg industrialisation.[83]

The lack of a local Indian investing class with available capital could have been worked around using the Free-Standing Company (FSC) model identified by Wilkins. The FSCs incorporated in one country, but had their primary operations in another.[84] Many of these firms incorporated in London to take advantage of the buoyant capital markets, but located their operations overseas, often in sectors such as mining and plantations. These firms were significant drivers of Foreign Direct Investment (FDI) in the late 19th century.

In a period when incorporation became cheaper and easier this would appear to provide an admirable solution to the capital issues in the Calcutta market, enabling local expertise to pursue opportunities in India, financed by equity capital supplied from the UK. Indeed, accounts of the

---

80 Roy, "Trading firms in Colonial India," 29.
81 Rungta, *Business corporations in India,* 227.
82 Joost Jonker and Keetie Sluyterman. *At home on the world markets, Dutch international trading companies from the 16th century until the present*, (The Hague, Sdu Uitgevers, 2000). Describe similar conditions in the Dutch East Indies during the 1860s, where thin credit markets problematized the increasing need for investments and advances on plantation crops such as Tobacco.
83 Rungta, *Business corporations in India,* appendix 8.
84 Wilkins and Schröter, *The Free-Standing company.* The firms were registered but had no managerial or operational functions in capital markets such as London, just a 'brassplate'.

launch and operations of firms such as the Assam Co. and Jorehaut Tea Co. bear a striking resemblance to this model of operation.[85] Chapman, however, claimed that the number of FSCs in India was small and that they did not survive for long. In the tea sector he found that of 15 independently founded joint-stock tea companies from 1850 to 1870, 11 were linked to managing agents by 1900. The FSCs populated emerging sectors such as tea and jute, but were rapidly out-competed by the established managing agents.[86]

Although the improving conditions of incorporation facilitated the wider adoption of the joint-stock form, Chapman claimed they were soon subsumed by the managing agents. Opportunities in emerging sectors such as tea encouraged new entrants, but, Chapman claimed, established firms had various entrenched advantages over the newcomers. Their partners often held key roles in local business networks that improved access and control over a range of critical resources, such as credit, which constrained outsiders.[87] They also had access to networks of private capital in Britain, which proved a more effective system of financing than raising capital through share issues.[88]

George Akerlof complemented this argument in his discussion on information asymmetries and markets.[89] The information needed to evaluate projects or monitor investments in colonial markets was limited and often inaccurate, which dissuaded British investors from investing in what were perceived as risky projects. However, managing agents were able to use their

[85] Antrobus, *The History of the Assam Company*, and *A history of the Jorehaut Tea Co. Ltd. 1858 –1943* (Tea and Rubber Mail, 1948).
[86] Stanley Chapman, “British Free-Standing Companies and Investment Groups in India and the Far East,” in Wilkins and Schröter, *The Free-standing Company*, 218-220.
[87] Chapman, “British Free-Standing Companies,” 204-205. The partners in India were often on the boards of banks, agents for insurance companies and on the boards of various infrastructure and transportation companies, all of which provided crucial and limited resources in Bengal.
[88] Chapman, *Merchant Enterprise*. British investors increasingly sought opportunities to invest in profitable colonial ventures. The managing agents used their expertise and reputation to attract investment from such private sources. Chapman, “British Free-Standing Companies,” 207-208, claimed the majority of projects in India were too small to efficiently raise capital in London.
[89] George Akerlof, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* (1970).

proximity to the British market through their networks to build trust amongst investors.[90] The managing agents acted as a guarantor for the joint-stock firms, encouraging both banks and individuals to lend or invest in the ventures.

Capital requirements in the emerging industries were higher than could be adequately managed in the existing partnership system. The risky nature of these projects incentivised participants, both investors in London and entrepreneurs in India, to seek ways to diversify the risk.[91] The dual ownership structure of the managing agents reduced exposure for both the managers and investors. For Casson, this was their key purpose, "the separation of ownership and management effected by the managing agency system is designed to distribute the enormous risks involved in the process of colonial and imperial development as widely as possible."[92]

Chapman noted a fundamental shift in the operations of the trading firms caused by the rapid improvements in communication and transportation in the 1860s and 1870s. In particular, the completion of the London to Calcutta telegraph in 1870 lowered the speed of communication to seconds rather than weeks. This reduced the capacity of trade intermediaries to leverage preferential access to information as manufacturers and customers could now connect directly.[93] For the trading firms, further diversification became a critical strategy as profits in the old, commission-agent trade models shrank.

Opportunities in the emerging manufacturing sectors had to be pursued, and the established firms could leverage their managerial capabilities. Chapman noted that, "instant communication opened up the possibilities of global organisation but did not prescribe how control could effectively be maintained."[94] The managing agents' experience in controlling decentralised trade operations in a wide range of products had equipped them with versatile managerial control

---

[90] Roy, *Economic History of India*, 261. "Given limited information about the capacity of individual managers or the reliability of individual owners, management tended to concentrate in reputed, branded, and publically visible firms."
[91] Chapman, *Merchant Enterprise,* 116.
[92] Casson, "An economic theory of the Free-Standing company," in Wilkins and Schröter, *The Free-Standing Company,* 124.
[93] Chapman, *Merchant Enterprise,* 118-119.
[94] Ibid, 226.

systems.[95] For Jones, it was the managing agents' capacity to manage information, knowledge, resources and relationships in and between the centres of trade that enabled their success. They were able to reduce information and reputation asymmetries, subsequently lowering costs in obtaining resources and finding markets for their products.[96] In contrast, Sircar pointed to the problems encountered in the hierarchical management system implemented in joint-stock ventures such as the Assam Co.[97]

Chapman classified the managing agents after 1870 as 'investment groups'. The managing agent acted as a coordination mechanism for the investments of the partners. Jones made a similar distinction, equating the agents to 'business groups', with a centralised firm controlling the allocation of resources between the different elements of the group. Chapman termed this arrangement a "legal fiction of agency" through which no real agency activity was undertaken, with the managing agent contract a device of control.[98] This allowed the partners to offset the risk of fixed capital investments into the joint-stock firms that they promoted and effectively controlled.

The partners' ability to retain control of these diversified operations, off-setting risk and losses in the joint-stock firms, whilst extracting both dividend profits and commission fees made this model particularly attractive.[99] The commission payments, guaranteed over long periods of time, reduced exposure to volatile dividend profits. For Chapman, "there can be no serious doubt that the investment group was primarily a device to maintain the wealth and power of the family (or families) that controlled the particular business."[100] Misra also emphasised the importance of control, but one that allowed the firms to restrict access to industrial enterprise to elite European

[95] Ibid, 225.
[96] Jones, *Merchants to multinationals*, 6-7.
[97] Kalyan Sircar, *A tale of two boards: some early management problems of Assam Company Limited, 1839-1864* (Sameeksha Trust, 1986).
[98] Chapman, *Merchant Enterprise*, 271.
[99] Roy, *Economic History of India*, 259–260.
[100] Chapman, *Merchant Enterprise*, 250-251.

colonial society.[101] The ownership structure enabled the partners to reserve entry to the firms whilst protecting the partners from the interference of shareholders.[102]

Most authors agree that the managing agents rapidly proliferated in the period after 1870. There is very little information about the numbers or distribution of managing agent activity prior to 1870, but by 1875 Rungta claimed there were 31 managing agents in Calcutta, responsible for 90 of the 128 listed companies.[103] Misra calculated that by the late 19th century there were 60 significant managing agents and by 1915 they controlled 75 per cent of industrial capital in India.[104]

Whilst this points to the widespread use of the form, it is difficult to judge the performance of the individual firms themselves. Due to the use of the partnership form, there was no public reporting requirements for the agents in the 19th century. Chapman used data on capital from six firms to illustrate the capacity of the managing agents in India and the Far East to significantly grow their capital base.[105] Jones' detailed study of the performance of a number of selected cases in the first half of the 20th century again demonstrated that the firms were able to become robust and profitable enterprises.[106] Indeed, despite retaining the partnership and using dispersed networks, they were able to achieve a scale of operation contrary to the expectations of Chandler.[107]

The profitability of the individual firms did not necessarily translate into good results for the shareholders or the wider economy. The potential for misalignment of interests between the

---

[101] Misra, *Business, Race, and Politics in British India*, 5-7. A view supported in Stephanie Jones, *Merchants of the Raj: British Managing Agency Houses in Calcutta yesterday and today* (McMillan, 1992), whose interviews with retired partners from a number of Calcutta firms from the mid-20th century point to endemic racism.
[102] Rungta, *Business corporations in India*.
[103] Rungta, *Business corporations in India,* 239.
[104] Misra, *Business, Race, and Politics*, 5.
[105] Chapman, *Merchant Enterprise*, 233, appendix one.
[106] Jones, *Merchants to multinationals,* appendix 1 and 2, presented a comparison of 20 firms Return on Capital Employed (ROCE) from 1895 to 1998.
[107] Geoffrey Jones and Judith Wale, "Merchants as Business Groups: British Trading Companies in Asia before 1945," *Business History Review*, 72, 3 (1998).

partners and shareholders, or for more malfeasant actions was significant.[108] Rungta also questioned the extent to which the system did actually channel external capital effectively into the nascent manufacturing industries.[109] Rather than improving the stock of capital and enabling a manufacturing sector to establish itself, the firms did nothing more than invest the smallest amounts they could to generate excess profits for small numbers of British partners.

More recently, authors such as Roy have provided a revisionist reading of the role and impact of the managing agencies.[110] Such revisions identify a more nuanced understanding of the incentives and constraints facing the entrepreneurs and shaping their choice of business form.[111] Jones and Wale concluded that, "the Chapman view of them as primarily financial devices to 'maintain the wealth and power' of families hardly does justice to their complexity and durability."[112]

2.7 Further research opportunities

The current literature provides a rather disjointed explanation of the period between 1813 and 1870. As noted, most of the accounts either finish in 1833 or start in 1850. The existing investigations of the sub-periods, firm types and individual firms have generally devoted limited analysis to understanding the transitions between the different types or systematically explored them in a comparative manner.[113] There is also a distinct lack of basic quantification of the number, size and scope of the firms; for example, there is no quantification of the trading firms in the years after 1833. This makes it difficult to accurately assess the trends relating to the transitions and growth of the different forms, or analyse changes between firm structures.

---

[108] Chapman, *Merchant Enterprise*, 222.
[109] Rungta, *Business corporations in India*, 238.
[110] Roy, *Economic History of India.*
[111] Jones and Wale, "Merchants as Business Groups."
[112] Jones and Wale, "Merchants as Business Groups," 382.
[113] Jones, *Merchants to multinationals,* 17, commented that, "the century before 1870 is of great interest because of the fluidity of firm strategies." Despite this he devotes only a single introductory chapter to the period. Chapman, *Merchant enterprise*, provides one of the few accounts that encompasses the whole period, yet limits the investigation to the transformation of the agency houses to the managing agents, largely ignoring the FSCs or joint-stock firms.

This has limited the scope of the explanations and has potentially underplayed factors that have driven change over the period as a whole. By addressing more fully the transition in the years after 1833, analysis of both the agency houses and the managing agents would be improved. Detailing the organisation and strategies of these later firms may reveal more clearly why the large agency houses failed and identify the changes in organisation that enabled the managing agents to thrive.

Likewise, developments within firm types seem to be poorly explained. The operations of the managing agents in the 1830s and 1840s described by Kling, and those of the investment groups described by Chapman in the 1870s, appear significantly different. Understanding how the firms evolved in the intervening period would improve understanding of the rationale for the emergence of the form and subsequent changes to it. In particular, questioning whether the agents were responding to a demand for managerial services or manipulating control over the joint-stock firms through the legal fiction of the management contract would shed further light on the structure.

The predominant factor used to explain the transition between the firm types has been the availability of capital and credit. The thinness of the markets in Calcutta explained the rise and fall of the agency houses and subsequently the managing agents. Likewise, the limited availability of managerial capabilities and capacity was noted across the period. Chapman emphasised the importance of control over these resources as the characteristic that defined the success of the managing agents. The ability of the owners to exert control over the joint-stock firm, whilst extracting profits and lowering risks, was the key factor in explaining the proliferation of the managing agents. Finally, the capacity to manage complex networks and relationships was also an explanatory factor common to analysis of all the firms.

The existing analysis has tended to explain the development of the firms from distinctly external or internal perspectives. The literature on empire and the EIC presents the actions of the firms as contingent on the economic and political environment. Whilst contextualising the opportunities and constraints created by the environment, this has tended to remove agency from the entrepreneurs. Misra nuanced this approach, showing the importance of British colonial culture in shaping the decisions of the partners. However, these were business men, often managing extensive portfolios of investments backed by British investors. The extent to which the management of their enterprise to create profits for themselves and their investors was subsumed in favour of enhanced, colonial social-standing is questionable.

The claims that the partnership was retained as a device to restrict control, with decision making vested in the partners to the exclusion of professional managers and experts, may also be over-determined, whilst the issue of managerial control over agents seems to have been significantly underplayed in these readings. The more specific efforts to understand the firms and entrepreneurs as independent entities, predominantly located in business history, have detailed the internal operations and management but have mainly focused on single firms or types, and thus limited their generalizable explanatory power. There has been no cohesive or systematic method of analysis applied across the period.

To improve on the existing literature, this thesis adopts a broader longitudinal and comparative approach. This is the focus of the first research question; how did the ownership, organisational structures and governance arrangements of Anglo-Indian trading firms change between 1813 and 1870, and did one or other form proliferate? This is addressed through better quantification of the firm types to highlight more clearly trends in the utilisation and structure of the different forms across the period.

The fragmented periodization and distinctions in the current historical literature between the importance of internal and external factors in explaining the development of the firms, opens an opportunity to find a generalizable explanation of the use of different forms. This is the focus of the second and third research questions: Why were certain forms of ownership and organisation preferred, and which factors determined an entrepreneur's choice of form; did the choice of ownership and governance affect the performance of the firms? Within economic and business history two general explanations for the development of firms conducting long distance trade are of particular interest for this thesis. The first is the change in the cost of credit and capital. The second is improvements in the flow of information and the transfer of knowledge.

Analysis has shown a strong relationship between the evolving capital requirements of the firms and the scale of financial markets.[114] The main thrust of this analysis has been towards understanding the conditions of industrialisation and the predominance of the joint-stock form as an enabler of this process. Although, as Cottrell notes, "the partnership could be used as the basis for very flexible forms of organisation … Extremely complex and capital intensive concerns involving multi-site operations and combining manufacturing, merchanting and even banking could and did operate as partnerships."[115]

The financing of trading firms has been largely analysed within chains and networks of short-term credit, and the role played by merchants in linking producers and customers.[116] Throughout the 18th and 19th centuries the development of these firms was linked to improvements of credit systems and instruments that enabled longer and deeper cycles of advances to be made. The capacity to coordinate asymmetric supplies of credit between metropolitan centres and colonial markets was a critical characteristic of the international trading firm in the 19th century. This analysis emphasised that short-term credit could be readily fulfilled through the partnership form.[117]

Alternatively, Casson proposes a "vision of the economy as an information system… The focus is on the handling of data relating to goods and services rather than handling of goods themselves."[118] In this interpretation, firms act as intermediaries, linking producers and

[114] Oscar Gelderblom and Joost Jonker, "Completing a Financial Revolution. The Finance of the Dutch East India Trade and the Rise of the Amsterdam Capital Market, 1595-1612," *The Journal of Economic History,* 64, 3 (2004), Philip Cottrell, *Industrial Finance 1830–1914* (Methuen & Co, 1980).
[115] Cottrell, *Industrial Finance,* 10.
[116] Manuel Llorca-Jana, "The organisation of British textile exports to the River Plate and Chile: Merchant houses in operation, c. 1810–59", *Business History,* 53, 6 (2011).
[117] Christof Dejung, "Worldwide ties: The role of family business in global trade in the nineteenth and twentieth centuries," *Business History,* 55, 6 (2013).
[118] Mark Casson, *Information and Organisation, A new perspective on the theory of the firm* (Clarendon Press Oxford, 1997), 3-6**.**

consumers, and coordinating markets through the flow of information. The capacity by which firms could improve these flows was a significant factor in explaining both their development and the evolution of the markets in which they operated.[119]

Efforts to improve the coordination and flows of information have been used to explain the historical change in both industrial and trading firms.[120] Chandler found that hierarchical structures improved flows of information and reporting; this radically improved decision-making and enabled the growth of firms.[121] Due to the geographically-dispersed nature of their activities the organisation of trading firms, such as the EIC, VOC, and Hudson’s Bay Company, have been explained as responses to the management of information. Innovations in the structures of reporting and monitoring enabled these firms to expand their operations in the 18th century and open up international markets.[122]

Improvements to the flows of information and finance have also been widely debated as causes of the dramatic take-off in the volume and value of global trade in the second half of the 19th century. This phenomenon has predominantly been explained by the changes in technology which lead to dramatically lower transportation costs and cheaper, more effective forms of communication. Concurrently, the rise of free trade policies led to the creation of market institutions that reduced the costs of financing. These changes allowed information and finance to flow more efficiently, reducing the costs of trade and improving market integration.[123]

---

[119] Hugo Van Driel, “The role of middlemen in the international coffee trade since 1870: The Dutch case,” *Business History*, 45, 2 (2003), 81.
[120] Leos Muller and Jari Ojala eds, *Information flows: New Approaches in the historical study of business information,* (SKS, 2007).
[121] Chandler, *Strategy and structure.*
[122] Bowen, *The Business of Empire,* JoAnne Yates et al, “Distributed Work over the centuries: Trust and Control in the Hudson’s Bay Company, 1670–1826”, in Pamela Hinds and Sara Kiesler, Eds, *Distributed Work* (MIT Press, 2002), 27-54.
[123] Kevin O’Rorke and Jeffrey Williamson, *Globalization and history: The evolution of a nineteenth-century Atlantic economy* (MIT Press, 1999), neatly summarise these positions.

2.8 Historical applications of the theory of the firm

The historiography of the trading firms in Calcutta reveals both the importance attached to financing and the coordination of information. These themes can be combined to understand the mechanisms used by trading firms to improve their efficiency in accessing these key resources. Jones approached these issues through the use of transaction cost theory to explore why the managing agents survived and thrived well into the 20th century.[124] He proposed that their organisational structure improved the efficiency of transactions for these resources.

Coase identified that market exchange was not frictionless; costs were incurred due to information gaps and asymmetries in the process of search, contracting and enforcement. These are described as transaction costs. A firm could lower these costs by integrating the transactions into its hierarchy.[125] Williamson sought to better specify the determinants of integration.[126] As the level of asset specificity and the threat of opportunism in a transaction increased, actors, restricted by bounded rationality, would seek to use higher-powered governance and contracting arrangements to resolve the transaction, finally integrating it within the firm.[127] Termed Transaction Cost Economics (TCE), these hypotheses spurred theoretical and empirical research to understand how firms adapted to transactions with different characteristics.[128]

Meanwhile, contracting and relationships between internal firm actors were proposed as important determinants of organisation. Jensen and Meckling described the firm as, a 'nexus of contracts,' a legal fiction that enabled owners, managers, workers, and suppliers to contract their inputs with each other.[129] Berle and Means showed that corporations with highly diversified

---

124 Jones, *Merchants to multinationals*, 3-8.
125 Coase, *The nature of the firm*. The boundaries of the firm were determined by the capacity of the entrepreneur to manage the increasing size of the enterprise. Once these limits were reached the costs of internal exchange would exceed those of market exchange.
126 Oliver Williamson, *The economic institutions of capitalism: firms, markets, relational contracting* (Simon and Schuster, 1985).
127 See chapter 2.9 for a full discussion of Williamson's framework.
128 Oliver Williamson, "Market, hierarchies, and the modern corporation," *Journal of Economic Behaviour and Organization*, 17 (1992), Peter Klein and Howard Shelanski, "Transaction Cost Economics in Practice: Applications and Evidence", *Journal of Market Focused Management*, 1 (1996).
129 Michael Jensen and William Meckling, "Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure," *Journal of Financial Economics*, 3, 4 (1976).

stock ownership had to develop contracts to align the interests of managers (agents) to the owners (principals) to prevent opportunistic behaviour.[130] Likewise Alchian and Demsetz noted that once teamwork provided improved returns over individual effort, then teams needed to be monitored to reduce shirking that would lower output.[131] Due to the information asymmetries between the parties, opportunistic or malfeasant behaviour, such as moral hazard and adverse selection could occur at the cost of the principals.[132] Fama and Jensen explored how the balance of risks and rewards borne by the principal, as well as control and decision making rights, could be configured in various ownership forms to improve the efficiency of organisation.[133]

This body of theory has been adopted by a number of economic and business historians seeking to explain the development and transition between business forms. Williamson used TCE to illustrate the importance of organisational structures as mechanisms for reducing transaction costs in industrial enterprises.[134] Carlos and Nicholas sought to explain the emergence and persistence of the early-modern chartered trading companies through transaction cost and agency theory. The innovation of incentives and monitoring improved the alignment between distant managers and shareholders, reducing the threats of moral hazard and adverse selection.[135]

More recent work has explored these issues in both a longitudinal and comparative context. Hilt compared the performance of partnerships and corporations in the 19th century U.S. whaling industry, and demonstrated that the corporations failed as the incentive structure of the

---

130 Berle and Means, *The Modern Corporation,* 116.
131 Armen Alchian and Harold Demsetz, "Production, information costs, and economic organization," *American Economic Review*, 62 (1972).
132 Moral hazard occurs when the agent takes undue risks as the costs will not fall on him but the principal. Adverse selection results in the principal making sub-optimal choice as the agent exploits information asymmetries, usually by withholding information.
133 Eugene Fama and Michael Jensen, "Separation of ownership and control," *Journal of Law and Economics*, 26 (1983).
134 Oliver Williamson, "The Modern Corporation: Origins, Evolution," *Journal of Economic Literature* 19, 4 (1981), Alan Dye, "Avoiding holdup: Asset specificity and technical change in the Cuban sugar industry 1899–1929," *Journal of Economic History,* 54, 3 (1994).
135 Ann Carlos & Steve Nicholas, "Agency problems in the early chartered companies: The case of the Hudson's Bay Company," *Journal of Economic History,* 50, 4 (1990), Santhi Hejeebu, "Contract Enforcement in the English East India Company," *The Journal of Economic History,* 65, 2 (2005), Julia Adams, "Principals and Agents, Colonialists and Company Men: The Decay of Colonial Control in the Dutch East Indies," *American Sociological Review,* 61, 1 (1996).

partnerships bonded distant agents more successfully.[136] Hennart and Casson explored which transactions firms sought to integrate when explaining the emergence of Free-Standing Companies.[137] This analysis has shown how evolving market structures changed patterns of asymmetric information, subsequently incentivising the adoption of different business forms.

These accounts show how firms evolved to lower transaction and agency costs using hierarchies, organisational structures, contracts, incentives and enforcement mechanisms. The theory provides a dynamic explanation that analyses how these costs changed overtime and how different business forms reduced them.

Several major criticisms have emerged regarding the use of this theory in historical research. Historians particularly question the narrowness of the theory's assumptions. The social and cultural settings in which historical agents are situated are often distinct from the contemporary world in which these models are created. This analysis often fails to capture the real functionality of firms in their historical setting.[138] Rather than accounting for a full range of factors behind the entrepreneur's decisions, these descriptions over-determine a single line of inquiry and promote mono-causal readings.[139]

Questions have also been raised about the ability to empirically identify transaction and agency costs in a meaningful way. The ability to measure agency costs, such as moral hazard or adverse selection, in a systematic manner is questionable, particularly with historical data, as motivations and behaviours of actors may be unrecorded. There is also a tendency to conflate transaction and

---

[136] Hilt, *Incentives in corporations.*

[137] Jean-Francois Hennart, "Transaction-cost theory and the Free-Standing Company", Casson, "An economic theory of the Free-Standing Company," in Wilkins and Schröter, *The Free-Standing Company*.

[138] Mark Granovetter, "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology*, 91, 3 (1985), Sumantra Ghoshal and Peter Moran, "Bad for Practice: A Critique of the Transaction Cost Theory," *The Academy of Management Review*, 21, 1 (1996), Nicolai Foss and Peter Klein, "The Theory of the Firm and Its Critics: A Stocktaking and Assessment," in Jean-Michel Glachant and Eric Brousseau, eds. *New Institutional Economics: A Guidebook* (Cambridge University Press, 2008).

[139] Richard Langlois, "Chandler in a larger frame: Markets, Transaction Costs, and Organizational Form in History," *Enterprise and Society*, 5, 3 (2004). As Langlois noted, "there are more things in heaven and earth than are dreamt of in the philosophy of asymmetric information."

agency costs into a general set of costs which distorts analysis as they can have distinctive effects.

However, the theory has conceptual flexibility to overcome many of these issues. The theory is driven by the concept that the firm's ownership and organisation was a function of improving efficiency through the internalization of market exchange for different resources and assets, and, rather than narrowing, can be extended to look for multi-causal factors. One way to address the issue of measurement is to look at the relative level of impact of certain transactions over time on choice of ownership and organisation.

2.9 The methodology and analytical frameworks

These theories establish a relationship between ownership, governance and organisation. They focus on understanding the choices and decisions of entrepreneurs, and seek to identify the sets of problems they solve through organisational selection. The use of transactions and contracts as the units of analysis provide tangible entities that can be identified and tracked overtime. Contracts are often articles of historical record and, although there can be difficulty in clearly identifying motives, it is possible to find links between the behaviour of agents and the development of contracts.

The methodological approach described as an *Analytical narrative* incorporates theory as a tool with which to analyse a historical narrative. The narrative identifies the actors, in this case the entrepreneurs in the different firms, and the context within which they act. The actors' decisions are assembled to demonstrate how these "choices generated events and outcomes."[140] The primary outcomes of interest for this thesis are the decisions of the entrepreneurs, and the different forms of business ownership and organisation adopted in the Anglo-Indian trade.

---

[140] Bates et al, *Analytic Narratives*, 14.

The other outcomes relate to the performance of the firms based on various metrics.[141] The most widely-used method employed by the firms to assess performance was balance sheet calculations of capital and profit; these are presented where found. Although not directly employed by the firms as a metric, the return on capital employed (ROCE) is also estimated. Chapman found that merchants in the 1830s used calculations of profit margins on capital indicative that a similar type of metric was understood and used at the time to measure the performance of firms.[142] Survival relative to other firms, and the proliferation and contraction of firm types also provide indicators of performance.

The analytic narrative approach seeks to explain these outcomes "by identifying and exploring the mechanisms that generate them." Models derived from theory are used to generate hypotheses and logic with which to analyse the mechanisms and the outcomes.[143] This enables a formalised evaluation of the narrative, asking whether the theory finds confirmation in the data and how well the theory stands up in comparison to other explanations. Through analysis of the narrative, claims in the literature and hypotheses from the theory can be tested. The findings can be used to falsify claims and inferences made as to the extent which the outcomes fit the hypotheses, supporting or rejecting the theory as an explanatory tool.[144]

In this thesis, transaction and agency costs are viewed as distinct explanatory factors. The analysis looks to identify the relative importance of the external and internal forces shaping the entrepreneurs' decision-making and shifts in the balance of factors over time. The aim is to

---

141 Chapman, *Merchant Enterprise,* appendix 313-318, uses capital accumulation as a performance indicator. Jones, *Merchants to Multinationals,* uses ROCE.

142 Stanley Chapman, "Financial Restraints on the Growth of Firms in the Cotton Industry, 1790-1850," *Economic History Review,* 32 (1979), 61. A Glasgow merchant in 1836 noted, "We should be glad to contract to deliver our goods upon a profit of three to five per cent upon our capital, over and above interest."

143 Bates et al, *Analytic Narratives,* 12. "The equilibrium of the model should imply the story we describe."

144 Gerben Bakker, "Money for Nothing: How Firms Have Financed R&D-Projects since the Industrial Revolution," *Research Policy*, 42, 10 (2013), shows that historical case studies can be used as Popperian falsification tests, with the findings of one case potentially refuting existing claims. The use of multiple cases provides a cumulative set of findings from which to draw stronger inferences regarding the effectiveness of the theory in explaining the findings.

identify commonalities and anomalies with the theory that could offer a generalizable explanation of the entrepreneurs' decisions.

This method is dynamic and enables the thesis to move away from a static explanation of one firm or type of firm, explaining more fully why choice of organisational form evolves as the relative importance of the different factors change. The method can also provide more generalizable conclusions than a descriptive narrative and case studies alone. Analysing the findings through a theoretical lens positions them in a wider context, relative to larger firm populations that can be analysed in a similar fashion. Whilst not producing such strong claims as formal statistical testing, the paucity of quantitative data makes this method particularly useful in enabling the application of economic theory in a formalised manner without recourse to statistical tests.

In order to systematically identify the transactions undertaken by the firms, an adapted form of commodity chain analysis is used. The commodity chain identifies the "network of labour and production processes whose end result is a finished commodity."[145] The chain describes the passage of products through a system of transformational activities.[146] This identifies the actors involved in the chain and the 'make or buy' decisions they encountered. The chains can also show flows of capital, credit and information between the different processes and actors. This is used to show the activities undertaken in the production and marketing of indigo and tea, the transactions between the different actors, and the location of the costs and profits within the system.

These transactions are subsequently analysed using a model proposed by Williamson, which succinctly formalises the relationship between governance structures and the characteristics of

---

[145] Hopkins and Wallerstein, "Commodity chains in the world economy."

[146] The commodity chain establishes the location of entrepreneurial activity and transformational processes in production of commodities, and subsequently where profits are extracted. This approach has been used as a tool in business history to understand the development of commodity flows and subsequent effects on economic and social development. Steven Topik, Carlos Marichal and Zephyr Frank eds. *From Silver to Cocaine: Latin American Commodity Chains and World History* (Duke University Press, 2006), Ian Hunter, "Commodity Chains and Networks in Emerging markets New Zealand 1880–1910," *Business History*, 79, 2 (2005).

a transaction. These characteristics are defined by the frequency of the transaction, classified as occasional or recurrent, and type of investment, classified as non-specific, mixed or idiosyncratic. The investment characteristic is determined by the level of asset specificity.[147] The higher the asset specificity and the greater the cost of opportunism and hold-up, the more likely the firm is to integrate the transaction, unifying it within the hierarchy of the firm. For example, the transfer of intermediate products across production stages would be an idiosyncratic, recurrent transaction. The failure to guarantee the transaction due to hold-up could result in a failure to produce and sell the final product, leading a firm to integrate the supply.

The ensuing matrix is shown in table 2, and is resolved through four main types of governance regime. Nonspecific investments are governed by the market, whereby buyers and sellers contract directly. Little dedicated contracting is needed as the investments are not specialised and easy access to other buyers and sellers protects both parties against opportunism as switching is easy.

Table 2. Williamson's transaction and governance framework

Investment characteristics	Non-specific	Mixed	Idiosyncratic
Occasional	Market governance	Trilateral governance	Trilateral/Unified governance
Frequent	Market governance	Bi-lateral governance	Unified governance

Source: Williamson, *The economic institutions of capitalism*, Chapter 3.

[147] Williamson, *The economic institutions of capitalism*. Transactions that required investment in assets that had little value outside the transaction had high asset specificity. Opportunistic behaviour, exerted through the threat of hold-up, could occur whereby one party exploits the other party’s investment in the asset to force them into accepting unfavourable terms or threaten to not complete the transaction.

When recurrent transactions occur in more idiosyncratic assets, and opportunism and bounded rationality are high, more complete governance mechanisms appear. Bi-lateral arrangements are used when high-powered contracts and incentives are required to ensure completion, but the level of asset specificity is not so great that scale economies are achieved through unification; the parties retain their independence. Bi-lateral arrangements may, though, require expensive monitoring arrangements and costs incurred in re-contracting if the relationship between the two parties' changes. The unified form or integration removes the transaction from the market and internalises it within the firm. This allows for scale economies, but also has superior adaptive properties, so, if conditions with the transaction change, no external party need be consulted or contracts revised.

The framework encapsulates the main aspect of the theory: That firms will organise themselves relative to the transactions they undertake. However, there are clearly gaps in this abstracted matrix. The classification of the investment characteristics is debatable. What qualifies as an idiosyncratic or mixed transaction is open to interpretation, and will often be a relative rather than absolute judgement. Likewise, the actual governance regimes used by the firms may well fall outside or between those shown in the model. The framework does, though, provide a useful tool with which to assess the choices made by the firms relative to their main transactions.

To implement the agency theory analysis, the narrative identifies the different forms of contracts and incentives employed to manage the relationships between the different actors within the firms. The thesis analyses these sources using a model developed by Lamoreaux and Rosenthal.[148] In the model, the authors explore three agency costs: shirking, untimely dissolution, and minority oppression. They model the relative costs and benefits to an entrepreneur (agent) and investor (principal) when encountering these costs and predict whether

[148] Lamoreaux and Rosenthal, "Contractual trade-offs and SMEs' choice of organizational form," use this model to investigate the choice of ownership in 19th century US and French firms.

a partnership or corporation would better lower the costs. The predicted results are shown in table 3.

Two of the costs relate to the relationship between owners. In a multiple-owner company a majority shareholder can obtain personal benefit from the firm at the expense of minority shareholders. This is known as 'minority oppression'. Due to the nature of shared ownership, if an owner quits this could lead to the dissolution of the firm against the interests of the other owners. This is defined as 'untimely dissolution'. In both cases, these threats may lead to inefficient levels of investment as shareholders or partners are disinclined to risk being exposed to debts due to untimely dissolution or misappropriation of resources in the case of minority oppression.[149] If the threat of minority oppression is the predominant issue then a partnership will be preferred as proportionally-shared ownership avoids oppression. When untimely dissolution is the main threat, then the corporation provides the most robust solution as shares can be traded with other owners.

Without incentives an entrepreneur may shirk, and, to mitigate this outcome, an investor must monitor the entrepreneur. Yet monitoring only occurs when it is profitable and when the principal has adequate control. In this case, with less than 50 per cent equity, an investor will not have adequate control to make monitoring worthwhile. As a partner, the investor would have equal control and thus undertake monitoring. In the model, if shirking is the main cost then the partnership will be chosen when each investor owns less than 50 per cent of the equity.

As the authors note, if only one of these costs was the prevalent factor for all firms, then a single organisational form best suited to mitigating it would proliferate. Yet, when faced with all these factors, and with firms having different priorities due to the industry in which they are situated, the owner would need to balance the relative costs of the negative outcomes in the selection of ownership form. Of course, this shares similar problems with Williamson's model in that the

[149] Howard Bodenhorn "Partnership fragility and credit costs", *NBER Working Paper 16689*. Bodenhorn suggests that the partnership was weakened by the threat of untimely dissolution, as investment in fixed assets or even incurring debts may have been limited as partners' feared exposure to the costs of these debts in the wake of untimely dissolution.

costs are assessed relatively, particularly when the three are taken together. The comparison between equity stakes provide a degree of absolutism, but even that is an arbitrary distinction as control and decision-making rights were vested in different ways, particularly in partnerships.

Table 3. Lamoreaux and Rosenthal's agency cost and ownership model

Agency Cost	Corporation	Partnership
Shirking		Preferred if only cost and equity is less than 50 per cent per holder
Untimely dissolution	Sole option if the only cost	
Minority oppression		Preferred if only cost and equity is less than 50 per cent per holder
All three present	Preferred when untimely dissolution is costly and oppression is mitigated.	Preferred when monitoring is valuable or dissolution is not costly relative to appropriation

Source: Lamoreaux and Rosenthal, "Contractual trade-offs and SMEs' choice of organizational form."

2.10 Propositions and themes for analysis

These frameworks formalise a range of propositions to explain the organisation and ownership forms adopted by firms. These can be considered alongside the issues of credit and information highlighted in the historical literature to create a framework with which to explore and analyse the narrative of this thesis. In the case of trading firms the transaction cost framework would anticipate the predominant use of market-governance mechanisms as the purchase of trade goods should predominantly be a recurrent, non-specific transaction. Buyers and sellers would retain separate identities and contract directly in the market. More powerful governance mechanisms could appear as firms diversified into other activities, particularly manufacturing, which involved more idiosyncratic transactions.

As noted in the literature, the firms were reliant on acquiring various sources of information to build knowledge of the markets. Although information can be acquired through the market, obtaining trusted information and turning it into useful knowledge requires investment in human capital and systems that are idiosyncratic to a firm. In this case, information and knowledge may be viewed as idiosyncratic transactions which could influence the structure and governance of the firms. The same analysis could also apply to transactions for credit and capital. More powerful governance mechanisms such as integration may have been used to lower the costs of such critical transactions.

With trading firms predominantly seeking to control agents at distance and resolve issues of asymmetric information, it would be expected that organisational form was designed to minimise costs relating to shirking or other opportunistic activities. The extent to which the effects of opportunism, but also untimely dissolution and minority oppression, could be mitigated through contracts, articles of association, or remuneration packages would have a significant impact on determining a firm's success

However, the trajectory of the trading firms' development saw them evolve from trade intermediaries to become producers and managers of infrastructure. As the firms integrated into production, requiring increased long-term capital investment into assets, the use of the corporation would become a better choice as limited liability and freely transferable shares enabled deep capital formation. Integration and rising costs of fixed investment would also increase the costs of untimely dissolution and encourage the use of the joint-stock form.

Yet, as Lamoreaux and Rosenthal point out, if entrepreneurs face one dominant factor then a single business form that best mitigated this cost would dominate. However, when multiple costs were present, entrepreneurs had to address various trade-offs and find a form that best balanced competing pressures. This opens the question of whether one form could adequately address multiple costs effectively.

Chapter 3 Indigo, volatility and slow-growth, 1813 to 1850.

3.1 Introduction

Rescinding the monopoly in 1813 brought changes to both the scale and structure of the Anglo-Indian trade. Using new data from the Barings archive this chapter shows that the value of the trade almost doubled between 1813 and 1850, but was volatile in nature, with financial panics in 1833 and 1847. A detailed analysis of the indigo market shows that unpredictability in the levels of production led to volatility in supply and prices. Commodity chain analysis highlights the changing role played by the trading firms, moving from intermediaries and coordinators, to generators of credit, capital and information flows throughout the chain.

Analysis of the trading firms, drawing on a new data-set assembled from Calcutta commercial directories, shows that the number of trading partnerships increased by over 250 per cent. There was also increasing diversification amongst the firms with a minority seeking to expand in size, and a majority changing their organisational strucutre after 1830.

The chapter details the economic environment in which the agency houses and later trading partnerships operated. The scale and structure of the trade and functioning of the indigo market reveal the opportunities and constraints faced by the firms. The subsequent analysis indicates how the firms were organised to undertake transactions in the indigo trade. This provides the context for the detailed case studies of John Palmer and Co. and Gisborne and Co. to explore how the firms' ownership and organisation changed in relation to these developments in the economic environment.

3.2 A new market emerges.

Those in favour of rescinding the EICs monopoly claimed the change would improve the trade's overall value through increased participation. A gradual increase in the number of agency houses, in the years between 1813 and 1830, stimulated fitful growth. Chaudhuri found that the value of both imports and exports in Bengal had risen between 1813 and 1839. The value of imports grew from Rupees (Rs.) 16 million (£1.6 million) to Rs. 57 million (£5.7 million), whilst exports rose from Rs. 46 million (£4.6 million) to Rs. 120 million (£12 million); the total value of trade growing by 185 per cent. The annual average growth rate between 1813 and 1827 was around 7 per cent for imports and 2 per cent for exports, although the rate slowed between 1828 and 1839, to 1 per cent and remained at 2 per cent.[150]

Calcutta remained the primary seat of government for the EIC in India, and due to the size of Bengal's economy saw it become the dominant economic centre for British traders in India. Indeed, in the first half of the 19th century, the scale of trade and economic activity in Calcutta made it the leading entrepôt for Anglo-Asian trade, and it would retain a level of importance alongside other major entrpepôts such as Hong Kong and Singapore into the 20th century. The city was dominated by British economic interests to a far greater extent than the other presidency cities, Madras and Bombay, where powerful local mercantile elites were more prominent actors.[151]

However, as shown in figure 1, similar trends of growth were found in Bombay. Although a smaller centre of trade than Calcutta, Bombay saw the value of imports and exports increase,

---

150 Statistics from Kirti Narayan Chaudhuri, "Foreign trade and balance of payments," in Dharma Kumar and Meghnad Desai (eds.). *The Cambridge economic history of India. Vol. 2, C. 1757-1970* (Cambridge University Press, 1983), 828-829. These are nominal values of merchandise excluding imports and exports of treasure.

151 The presidency cities of Calcutta, Madras and Bombay were the administrative centres of government for the regions controlled by the EIC. The scale and organisation of trade within Calcutta and Bengal was not necessarily representative of all of India due to the Anglicisation of the city and region. Tirthankar Roy, *India in the World Economy* **(**Cambridge University Press, 2012), details the distinct nature of the economic systems in each presidency, driven by factors including local endowments, cultures and differing interactions with European interests. Tripathi, *The Oxford History of Indian Business,* Chapters 4 to 6, also discusses the distinct economic systems in India and significant differences in their respective firm ecologies.

driven by the export of raw cotton and import of British textile goods. The value of exports increased from Rs. 3 million (£300,000) in 1813 to Rs. 5 million (£500,000) in 1830, whilst the value of imports also rapidly expanded, with British manufactures rushing to fill the gap left by the EIC.[152]

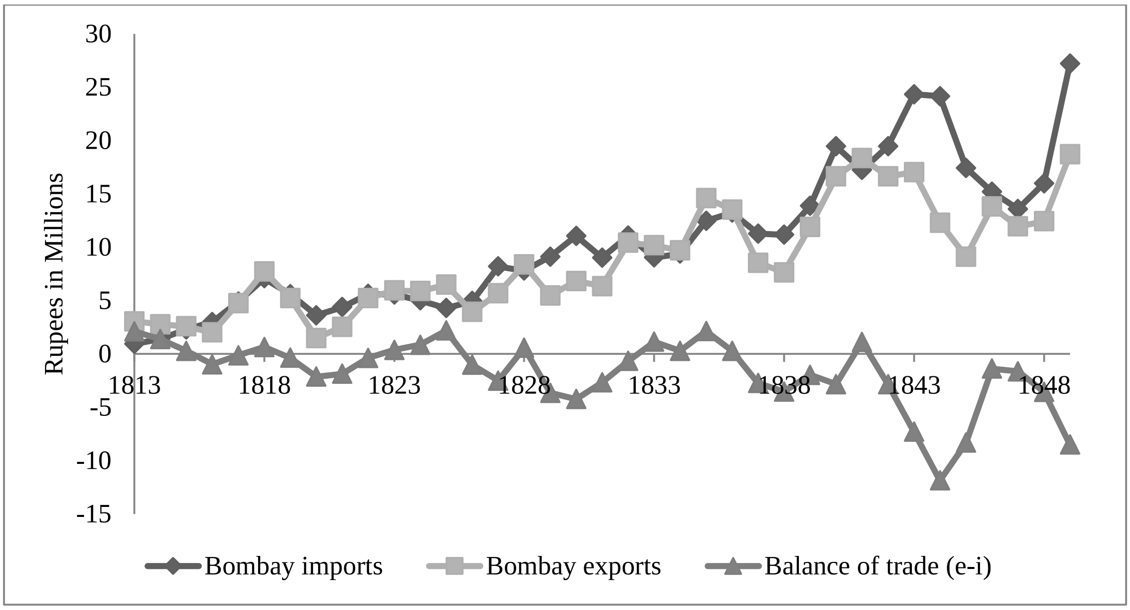

Figure 1. Nominal values of imports and exports in Bombay, 1813 to 1849.
Source: Barings Archive (BA) HC2, article in the Bombay Times, March 6th 1850.
Note: Balance of trade expressed as the value of exports minus imports.

These developments changed the established balance of trade and significantly affected the exchange rate, which fell from around 2.6 to 2 shillings to the rupee. This rate remained reasonably stable throughout the rest of the period of this thesis. A currency reform act in 1835, through which the EIC issued a single coinage system throughout the presidencies, further stabilised the exchange rate. However, the discount rate on bills of exchange fluctuated making remittance of funds back to Britain problematic, as trading firms had to find optimal moments when the prices of these remittance instruments were favourable.[153]

---

[152] These are nominal values taken from an article on March 6th 1850 in the Bombay Times (Barings Archive HC2). They are drawn from the official figures from the Government Customs house.

[153] Tripathi, *Trade and Finance in Bengal*, 137. Some of the fluctuation can be attributed to seasonal trends, particularly related to the EICs reconciliation of its treasuries in Canton, Calcutta and London to manage the tea trade. This made coordination between the cycles of financing for products like indigo difficult. A proportion of the fluctuation in the discount rates, particularly on bills offered by the trading firms, was driven by the general conditions of the trade and the reputation of the firm, which would determine the acceptors perception of the likelihood of redeeming the bill.

A dramatic fall in transport costs between Calcutta and London, in the case of indigo declining from £20 per ton in 1813 to around £5 per ton around 1835, and a decrease in sailing times encouraged further expansion of the trade.[154] Trade in Bengal grew throughout the 1840s, with the value of exports and imports increasing by around 30 per cent over the decade.[155] This matched the broader growth trends in Britain's international trade, which saw the total value of international exports and imports as a share of GDP increase from 21.4 per cent in 1820 to 27.8 per cent in 1850.[156] Anglo-Indian imports and exports become an increasingly large proportion of Britain's total trade balance. Asia and the Near East's share of British exports increased from 7 per cent to 20 per cent between 1805 and 1845 and accounted for 20 per cent of British imports in 1845. By 1845 Asia had become Britain's second largest export market, with only Europe receiving a greater quantity of goods.[157]

Despite the growing level and value of trade, the markets in Calcutta and elsewhere in India were volatile. The Bengal economy was racked by financial panics in both the 1830s and 1840s; the collapse of the principal Calcutta agency houses in the early 1830s led to a local credit crisis, whilst the collapse of British financial markets in 1847 saw contagion and failure amongst Calcutta's banks and trading firms. The effects of both events carried throughout India; in Bombay in the years following the collapse of the agency houses the value of exports declined by half between 1836 and 1839, but rebounded to record values in 1842, characteristic of the volatile swings in the trade.

The composition of both import and export goods changed somewhat over the period. British exports of textile piece goods and manufactured goods grew steadily. However, a glut of cheap

---

[154] Taken from David Chilosi and Giovanni Federico, "Asian globalisations: market integration, trade and economic growth, 1800-1938." *Economic History Working Papers, 183/13*. London School of Economics and Political Science. Yryo Kaukiainen, "Shrinking the world: Improvements in the speed of information transmission, 1820–1870," *European Review of Economic History,* 5 (2001).
[155] Digital South Asia Library (DSAL) statistics section, No. 27 and 31 (1840–1865) and No. 18 and 24 (1860–1869)
[156] Kevin O'Rourke, Leandro Prados de la Escosura, and Guillaume Daudi, "Trade and Empire," in Stephen Broadberry and Kevin O'Rourke (eds.), *The Cambridge Economic History of Modern Europe, Vol. 1, 1700–1870* (Cambridge University Press, 2010), 106.
[157] Statistics taken from Chapman, *Merchant Enterprise,* 8.

manufactured goods in the years immediately following 1813 led to a brief collapse in the export market, and forced many merchants to identify goods more suitable for the Indian market. Demand for products such as metals steadily expanded after 1840.[158] In the case of Indian exports to Britain, the major products by value included raw cotton, indigo, sugar, and silk. Opium, although the highest value Indian export, was dispatched to China to fund the tea trade and was managed under a monopoly by the EIC until 1834.[159]

Of these products it was indigo which became synonymous with the agency houses. In the 18th century, indigo imported to Britain had predominantly been produced in the West Indies. Although indigo cultivation in Bengal had increased in the late 18th century, lobbying by West Indian merchants saw high import tariffs retained against Indian indigo and the EIC monopoly further restricted the trade. The tariffs were reduced in 1789 and cultivation consequently boomed, so that by the end of the 18th century India was the source of the majority of Britain's indigo.[160]

By the 1820s indigo was the most valuable export crop in Bengal, and, although it was replaced by opium, it remained an extremely valuable export good throughout the period of study.[161] Likewise, until the 1850s it remained amongst the highest valued imports from India to the UK.[162] Alongside British demand there were increasing re-export opportunities to Europe and North America. This made it a staple trade product for many of the agency houses and trading firms.

---

158 Nicholas Crafts, *British economic growth during the industrial revolution* (Oxford University Press, 1985), Tripathi, *Trade and Finance in Bengal*, 123 and 137, note that the rapid growth in British exports to India led to a glut followed by a collapse in demand and prices shortly after 1815.
159 Roy, *India in the world economy,* 125–127.
160 Benoy Chowdhury, *Growth of Commercial Agriculture in Bengal* (Calcutta: Quality Printers, 1964).
161 George Prinsep in Kirti Chaudhuri, ed. *The Economic Development of India under the East India Company 1814-1858; a Selection of Contemporary Writings* (Cambridge University Press, 1971). The value of indigo exports was amongst the highest in terms of percentage of the total value of Indian exports until the 1840s, and it remained, along with raw cotton and opium, one of the leading export crops until the 1870s.
162 Thomas Tooke in Chaudhuri, *The Economic Development of India*, using contemporary Board of Trade statistics, showed that indigo remained amongst the top valued British imports from India until the middle of the 1850s.

3.3 The lucrative but volatile indigo trade

The size and structure of the indigo trade was captured in various contemporary statistical sources. Table 4 presents results drawn from statistics collated by the partners at Barings; it shows the size of the indigo crop produced each year in Bengal, the amount of indigo imported to Britain, the level of domestic consumption, and the price for what is described as middling or consuming quality of indigo at the London auctions.

Table 4. Summary statistics of indigo production, import and consumption, 1814 to 1848

	Bengal Crop (Maunds)	British Imports (Maunds)	British Consumption (Maunds)	Nominal London price (£ pennies)	Real London price (£ pennies)
Maximum	172,250	131,695	111,815	114	108
Minimum	72,300	40,250	53,550	42	43
Mean	112,091	79,863	80,063	69	68
Standard deviation	24,213	24,967	17,026	18	18
Coefficient of variation	0.22	0.31	0.21	0.26	0.26

Sources: BA HC2 188 170 and BA HC2 2.352. Baring Bros and Co. Statistics of Indigo, and Statement for the creditors of the Bengal Indigo Company prepared by William Moran & Co. Notes: The production figures were stated in maunds, whilst the original figures for imports and consumption were expressed in 'chests' which have been converted to maunds. See the Glossary for further details on weights and measures. The prices reported in the first document were a spread of lowest to highest prices for three grades of indigo in London. In the second, a single average price is quoted for middling grade in London. The middling grade has been selected from the first and a mean average calculated to match the second series. Prices are per pound, converted into pennies, then deflated to give real values using the CPI index in Charles Feinstein "Pessimism perpetuated: Real wages and the standard of living in Britain during and after the industrial revolution," *Journal of Economic History*, 58 (1995). This thesis uses British wage and GDP series to deflate the various income, wage and trade values, as the actors in the trade were predominantly valuing their returns in Britain.

Several notable features of the indigo market are revealed from this data. Figure 2 shows the dramatic fluctuations in the level of production in Bengal. Growing and production techniques remained fairly constant over this period although efforts were made to grow the total amount of land under cultivation, increasing the crop size across the period. There were, however, significant difficulties in the production process, with the harvest highly dependent on weather conditions. In 1843 the level of production in Bengal was 162,500 maunds, yet due to poor weather, output collapsed the following year to 79,000 maunds, whilst a year later a bumper harvest saw 172,250 maunds produced. Further problems in production were traced to the financial crises of the early 1830s and 1847, when lending to indigo factories contracted, leading to bankruptcies or cessation of production.

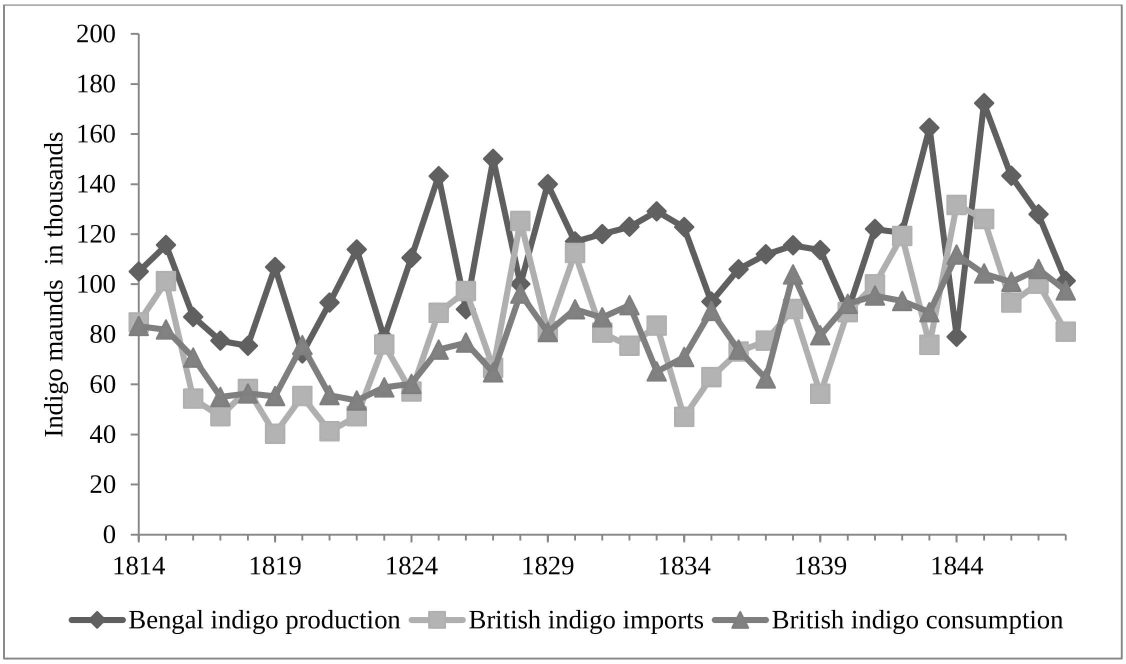

Figure 2. Estimated Bengal indigo crop, British imports and consumption, 1814 to 1848.
Sources: BA HC2 188 170 and BA HC2 2.352.
Note: See Figure 1 notes for discussion of the measures and conversions used in this series.

The vagaries of the harvest fuelled periods of under and oversupply in Calcutta which made coordination with demand and consumption in Britain difficult. Despite very similar mean levels over the series, imports 79,863 maunds, consumption 80,063 maunds, the coefficient of variation was significantly higher in the import data indicating greater annual variation in the levels of indigo imported into Britain, than in the levels of consumption. Figure 2 shows that this led to periods of oversupply, particularly in the late 1820s and early 1840s, in Britain.

Difficulties in coordinating supply and demand resulted in price volatility. The average price, expressed as a real value, paid for middling quality indigo at the London auctions is shown in figure 3. The years prior to 1830 show a similar pattern of rapid and dramatic shifts to those of production. There was also a general downward trend in the prices over the period. The coefficient of variation of 0.26 in the real indigo price can be compared to 0.12 for tea, highlighting the higher volatility in indigo prices.[163] The volatility meant producers had to develop capacity to rapidly adjust the unit costs of production, whilst the general downward trend in prices called for a more permanent reduction in production costs to remain profitable.

Figure 3. Mean average real price per pound of middling quality indigo in London auctions, 1814 to 1849.
Sources: BA HC2 188 170 and BA HC2 2.352.
Note: Prices are per pound, converted into pennies, then deflated using the CPI index in Feinstein "Pessimism perpetuated," to give prices as real values.

The years after the crisis of 1847 saw the indigo market become less volatile but smaller in scale. In figure 4 the total Bengal crop is seen to decline to an annual level of production between 100,000 and 120,000 maunds throughout the 1850s. The trends in imports and consumption were also more closely aligned after 1847, with fewer years when they were significantly unsynchronised, and a greater tendency for consumption to lead imports, reducing the conditions of over-supply that had bedevilled the market in the 1840s.

[163] The tea prices can be found in figure 21, p.180.

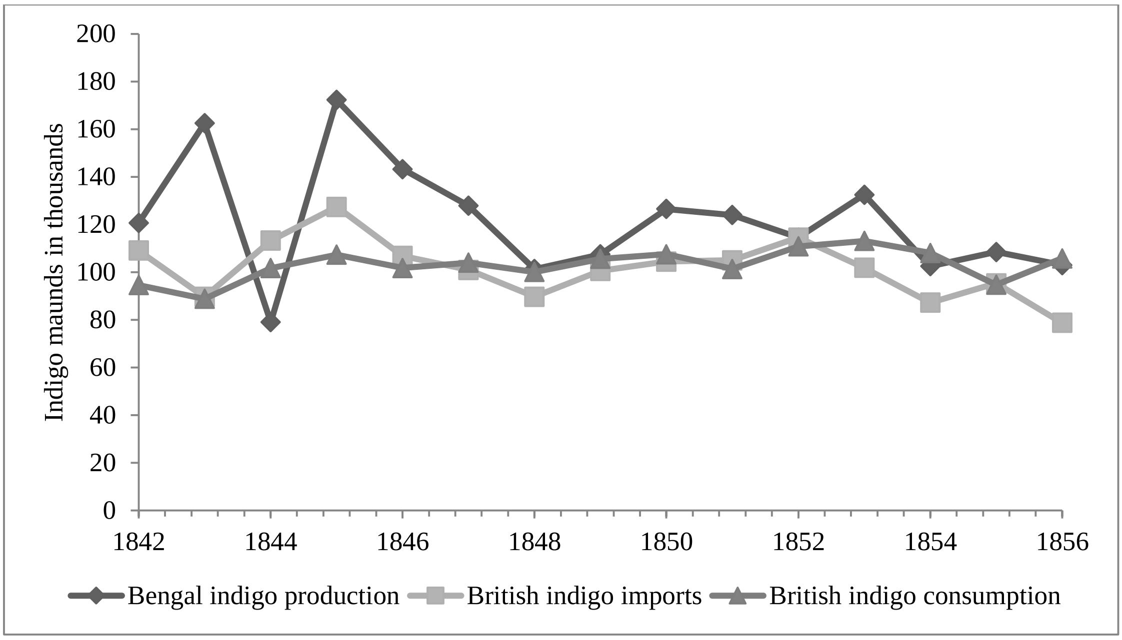

Figure 4. Estimated Bengal indigo crop, British imports and British consumption, 1842 to 1856.
Sources: BA HC2 188 170, BA HC2 2.462, BA HC 2.432
Notes: The data was drawn from three indigo circulars. The mean average of the reported figures has been used where possible. There was little, less than 1 per cent, variation in the production figures. There was more variation, but no more than 10 per cent in a given year, for the imports and consumption figures.

3.4 Organisation of the indigo market.

The most distinctive feature of the indigo market was the volatility in the production and subsequent instability in supply, demand and prices. These characteristics had significant implications for the organisation of the market and the operations of the trading firms. In India indigo was manufactured under two distinct systems: the ryoti system in which peasants were contracted with advances to grow and harvest the indigo leaves for sale to owners of indigo factories, and the zerat method which was entirely funded and managed by the factory owners, with peasants employed as wage labour. The ryoti system predominated prior to 1860, whilst the zerat system became increasingly widespread after this.[164]

[164] The terms ryoti and zerat are taken from Chowdhury, *Growth of Commercial Agriculture in Bengal* and Indrajit Ray, *Bengal Industries and the British Industrial Revolution* (Routledge, 2011), both provide a more detailed account of the differences in production methods, and discuss the transition between them.

3.4.1 The ryoti system of production

In Bengal, indigo leaves were planted in December. Under the ryoti system this was undertaken by thousands of peasants who contracted with the owners of the indigo factories to deliver an agreed amount of leaves at a fixed price. The peasant provided all the means of production, enabled through advances made by the factory owners. In June the peasants harvested the leaves and brought them to the factories. On delivery the debts incurred through the advances were paid-off, although these credit accounts were often left open as the peasants failed to fully pay down the debts. This marked the end of the first of the main transactions in the chain.

Once the leaves were delivered to the factory the extraction of indigo dye commenced. This process involved packing the leaves into tanks and fermenting them with water to siphon out the dye, which was then dried and cut into 'cakes'. Ray estimated that in 1831 there were 829 factories in Bengal involved in the production of indigo, with a number of large firms such as R.Watson and Co., and many small concerns often made up of a single factory.[165]

[165] Ray, *Bengal industries and the British industrial revolution,* 223. R. Watson was amongst the largest indigo firms and had a production capacity of 400 tons or 10,800 maunds a year. Smaller firms would produce a couple of hundred maunds a year.

Table 5. A commodity chain for indigo production and sale in 1840 under the ryoti system

Process	Season and time	Actor
Indigo leaf cultivation	Planting of leaves in December; cultivation through the spring. In certain areas two plantings were possible.	1000's of Peasant cultivators
Sale of leaves	Harvest of the leaves in June and July; then sale to factory owners.	Peasants and Factory owners
Manufacture of finished indigo cakes	Processing of the cakes throughout the summer.	Over 800 Factory owners
Transport to Calcutta		Factory owners
Public auction or private sale	Auction started in September and ran for a couple of months, depending on supply and demand.	4 Indigo brokers and auctioneers coordinated sales with the trading firms
Storage	Maunds are stored in warehouses and godowns before shipping.	30 Trading firms
Shipping to Britain	Sailing times around four months, though gradually declining in 1830s and 40s; maunds arrive in London around February.	Trading firms consigned to their corresponding firms in London
Storage	Maunds transferred to warehouses in London.	30 Corresponding firms
Public auction	Indigo auctions run through the spring when the first shipments arrive.	16 indigo brokers and auctioneers coordinated sales to wholesalers
Sale on consumer market		Wholesalers coordinated sales with final consumers (predominantly textile manufacturers)

Sources: Chowdhury, *Growth of Commercial Agriculture in Bengal* and Ray, *Bengal industries and the British industrial revolution.*
Note: Dark grey indicates the transactions involving the Calcutta trading firms, light grey marks the transactions between the Calcutta trading firms and their corresponding firms in London.

Once the production process was complete the factory owners transported the indigo cakes to Calcutta for sale at auction. This second major transaction was mainly conducted by specialised auctioneers and brokers. Firms such as William Moran and Co. coordinated the regular auctions and were responsible for determining the grades of quality of the different batches.[166] Quality was determined by colour and fixedness of the dye, with auctions held in the morning when the light was best for analysing the colour.

Four main grades of quality were used: ordinary, middling, good and fine.[167] The price difference between the grades is shown in figure 5. The different qualities moved fairly uniformly as the general price for indigo changed, but the differential between the grades did fluctuate, with the difference between low and fine ranging from 30 to 67 pence. The mean average difference, as a percentage of the highest grade, was 43 percent. Although there was some difference in unit cost between the qualities, driven by higher costs of better quality leaves, much of the production cost was fixed.[168] The ability to produce better quality indigo could therefore increase profitability.

[166] Roy, "Trading firms in colonial India," 34.

[167] BA HC2 188 170 lists three main grades: Fine Bengal, Consuming Quality and Low Oude. Alternatively the definition was done by colour from the least to most valuable: copper, violet, purple, and blue. BA HC2 432, E.I Mocatta Juniors Brokers July 25th 1854 Circular listed 16 different grades at auction, differentiated by regions, Bengal, Madras, Oude and grade of colour.

[168] Tirthankar Roy, "Indigo and the law in colonial India," *Economic History Review*, 64, 1 (2011), estimated the peasants received an average of Rs. 2 per bigha of leaves, whilst Chowdhury, *Growth of Commercial Agriculture*, estimated Rs. 4 per bigha was paid for the best leaves.

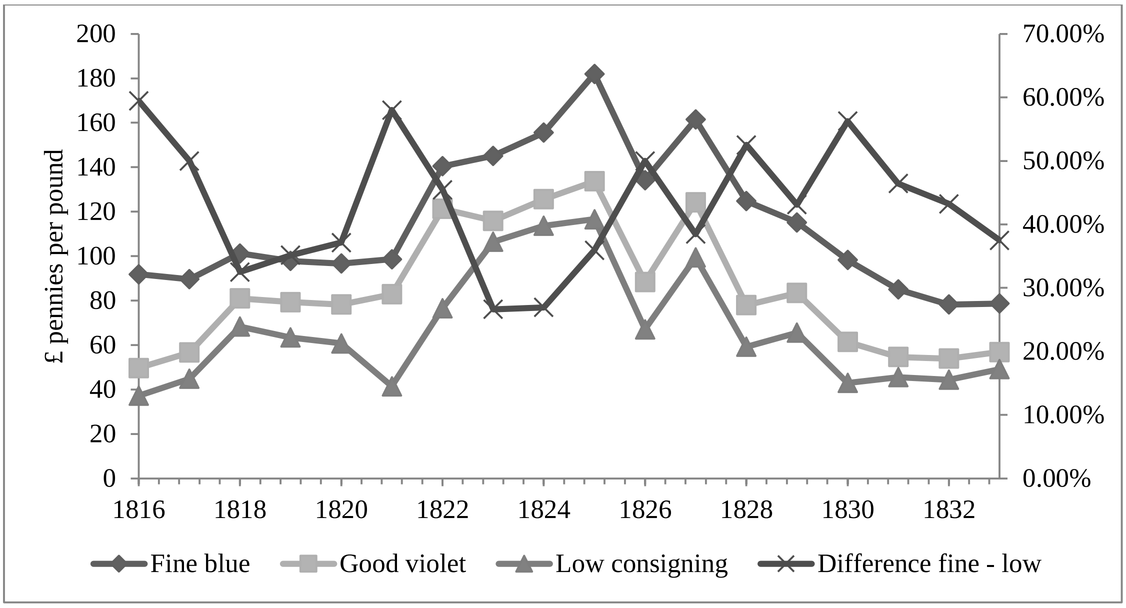

Figure 5. Real London indigo prices per pound differentiated by grades of quality and the difference between fine and low quality, 1816 to 1833.
Source: 1833 Report from the Parliamentary Select Committee on Manufactures, Commerce, and Shipping; with the minutes of evidence, 133.
Notes: The source quoted a high and low price achieved at auction for each grade, the high price has been chosen. Prices are per pound, converted into pennies and deflated using the CPI index in Feinstein "Pessimism perpetuated." The difference is calculated by subtracting the price for low quality from fine quality and expressing the result as percentage of the fine grade.

The sale of the harvest would run throughout the autumn with factory owners either selling directly to the trading firms or auctioning the batches. In 1829 there were 31 trading firms involved in the indigo trade. The 1831 Calcutta register listed 41 active trading firms, indicating that around 75 per cent of all trading firms were involved to some degree in the indigo sector. A concentration ratio shows that the leading four trading firms obtained 60 per cent of the crop in 1829; the top six firms accounted for 73 per cent. Palmer and Co. was the largest single purchaser with 24,655 maunds or 16 per cent of the total crop that year.[169]

In the period between 1830 and 1850 the majority of indigo exported to Britain was purchased by 30 or so trading houses in Calcutta.[170] In 1841, of the total of 123,186 maunds purchased, the

[169] The figures for 1829 are from Chowdhury, *Growth of Commercial Agriculture in Bengal*, 83, which lists the top six purchasers of indigo and the amount they purchased in maunds that year. These purchases have been used with the total production figures from figure 2, p.64, to compute the concentration ratios. BL Bengal Annual register, 1831.
[170] BA HC2 259. Translated from French, "Comparative details of the Indigo harvest 1840/41 and 41/42." This is a handwritten note which lists 32 firms purchasing indigo in Calcutta. The closeness of the total

largest purchaser was Cockerell and Co. with 21,171 maunds, whilst Gisborne and Co. was the fifth largest purchaser with 10,551 maunds. The concentration ratio of the top four firms accounted for 53 per cent of purchases of the total production. When expanded to the top six the figure was 68 per cent. The indigo market in Calcutta had become a little more competitive between 1829 and 1841. Although certainly more competitive than the pre-1813 monopoly, the market remained concentrated with oligopolistic tendencies.[171]

The trading firms stored and arranged for the indigo to be shipped to Britain where it was received by counterparties who conducted the final transaction of the chain. A document from Barings named 27 London based firms in 1837 selling indigo.[172] These firms would arrange for the storage of the product before the sales and distribution in the UK. A further 16 indigo brokers were listed in the Post Office London directory who would manage the sale of indigo to the end purchasers, often wholesalers, through auction.[173] A proportion of the imports to Britain were also re-exported for sale in Europe and elsewhere.

maunds purchased, 123,186, to the estimated production Bengal figure of 122,000, shows a reasonable correspondence and indicates the source is accurate.

[171] This was transformed into a Herfindahl–Hirschman Index with a result of 964. Stephen Martin, *Industrial Organisation in Context* (Oxford University Press, 2010), 295. "A concentration ratio closer to 100 per cent or a Herfindahl index closer to 1 (1000) meant an industry structure closer to monopoly, a concentration ratio or a Herfindahl index closer to zero meant an industry structure closer to the 'many small firms' or perfect competition." This indicates that the market was concentrated and oligopolistic in nature.

[172] BA HC2 2.142 Indigo report Nov 29th 1837 entitled 'List of unsold Indigo in the hands of importers.' This closely correlates to the 30 London East India agents listed as active in the Bengal Register for 1838. The Post Office London Directory of 1841 listed 23 East India Agents along with a further six specific indigo merchants.

[173] BL Post Office London Directory, 1841.

Figure 6. Estimated value of the indigo market in Britain, 1814 to 1848.
Sources: BA HC2 188 170 and BA HC2 2.352.
Notes: A simple estimation of total imports converted into pounds then multiplied by the price per pound for average quality indigo. The prices are real values, deflated using the CPI index in Feinstein "Pessimism perpetuated."

The size of the indigo market in Britain, in terms of its value, was similarly volatile, but there was a trend towards greater stability through the 1830s and 1840s. The estimation shown in figure 6, multiplies the imports by the price for average quality indigo, and whilst probably underestimating the total value is indicative of the annual changes in scale. The stability in the number of trading firms involved in the trade after 1830 was, perhaps, recognition of the limits to the scale of the market. The Calcutta register for 1843 listed 62 active trading firms of which 32 participated in the indigo trade, showing that over half of the trading firms were focused on other sectors.[174]

The distribution of costs and profits for the sale of one maund through the ryoti system is estimated in table 6. This model is for 1835, after the crisis of 1833 had subsided, and draws on data predominantly from that year but also from other sources in the 1830s. The paucity of data, particularly in the production process, means that these are only estimates, but they are good guidelines to the relative size and distribution of the costs and profits.

[174] BL Bengal Annual register, 1843.

The costs of planting, cultivating and harvesting the leaves were borne by the peasants. Cultivation accounted for around 36 per cent of the total costs per finished maund. The peasants extracted 11 per cent of the total profits, but this was split between many individuals. It was generally estimated that each peasant would make a surplus of 13 annas per maund (less than one rupee) through each harvest cycle.[175]

The costs of the factory production process included fixed investments in the factory assets and related financing costs, as well as the annual variable costs which consisted of wages and resources used in the production process. The factory owners also had to ensure that the finished indigo cakes reached the auction in Calcutta, incurring transport costs and brokerage fees. These accounted for 44 per cent of the total costs and in return the factory owners received 46 per cent of the profits. The factory owner's profit margin, accounting for fixed and variable costs, was around 30 per cent; potentially a good return.

The relatively small fixed investments required to set-up an indigo factory were a further incentive for new entrants. Ray estimated that Rs. 23 per maund was the norm for fixed capital investments in the industry.[176] This was required for the factory's infrastructure, including the vats, drying rooms and equipment such as water pumps, steam engines, and presses. The buildings required little maintenance but the machinery needed repair and replacement.[177] A factory capable of producing 500 maunds per annum would therefore require an investment of Rs. 11,500 or just over £1,000. The potential profits and low start-up costs explain the large numbers of Europeans who entered the sector in the early 1830s.[178] The variable costs would, though, amount to Rs. 55,000 (£5,500) per annum for 500 maunds, based on the figures in table

[175] There were 16 annas to the rupee. See the glossary for further details of currencies and exchange rates.
[176] Ray, *Bengal industries and the British industrial revolution*, 226-227.
[177] Kumar Prakash, *Facing competition: The history of indigo experiments in colonial India, 1897-1920* (Dissertation for Georgia Institute of Technology, 2004), 32-33.
[178] As a comparison Chapman estimated £5,000 to £6,000 of capital was required to establish a cotton spinning mill in Britain in the 1830s. Chapman, "Financial Restraints on the Growth of Firms in the Cotton Industry," 56.

6.[179] The start-up costs may have been low, but substantial annual credit was needed to cover the variable costs.

The agency houses purchased the indigo in Calcutta and had to bear the remaining costs of getting the indigo to auction in London. This would account for roughly 20 per cent of the total, made up from storage, shipping, tariffs, insurance, and brokerage fees. For this relatively small sum, the agency houses received around 43 per cent of all the profits generated through the chain.

The split of costs and profits apparently favoured the trading firms, who with minimal input could obtain a significant proportion of the profits. The peasants provided all the means of cultivation and harvesting and stood to generate only a small surplus providing the harvest was untroubled by weather. Likewise, the factory owners had to undertake two significant transactions, making advances to the peasants and coordinating the sale in Calcutta, whilst investing in the fixed assets of the factory and financing the annual variable costs. In a good year there were profits to be made, but a bad harvest or oversupply in the market could easily bankrupt factory owners who often had large outstanding debts for crops whose value could no longer be realised.[180]

[179] Ray, *Bengal industries and the British industrial revolution*, 226-227, estimated an industry average for variable costs of Rs. 145 per maund, or around Rs. 75,000 (£7,500) for 500 maunds.
[180] Roy, *Indigo and the law*.

Table 6. Costs and profits in the ryoti system, 1835

Process	Costs	Profits
Indigo leaf cultivation	Cultivation costs: For middle quality leaves to produce 1 maund of finished indigo, Rs. 55	
Sale of leaves	Price paid for the leaves: Estimated at Rs. 66.	Price paid by factory owner for 1 maund of leaves is Rs. 66 (Profit to peasants is Rs. 66 - Rs. 55 = Rs. 11)
Manufacturing process to finished indigo cakes	Fixed and variable production costs: 1 maund at factory cost was: Rs. 66 (leaves) + 23 (fixed costs) + 10 (finance costs) + 34 (variable costs) = Rs. 133	
Transport to Calcutta and storage	Freight costs: Krishnagar (area of highest indigo production in Bengal) to Calcutta estimated at Rs. 1. by boat.	
Public auction or private sale	Prices achieved in Calcutta market in 1835: Rs. 105 to Rs 210 per maund with Rs. 180 for middling quality. Brokerage fees of around 1% or Rs. 2 per maund.	Cost of 1 maund at Calcutta auction was Rs. 133 (production) + Rs. 1 (freight) + Rs. 2 (fees) = Rs. 136 (Profit to Factory owner is Rs. 180 - 136 = Rs. 44)
Shipping to Britain and storage	Insurance, freighting, tariffs and storage were estimated between 10% of the final London price, in this example Rs. 25 per maund from the sale price of Rs. 249.	
Public auction	Price achieved in London auction in 1835: S.d 5.9 for middling quality indigo per lb (converted to Rs. 249 per maund). Brokerage fees of 1% or Rs. 2.8 per maund.	Cost of 1 maund at UK auction is Rs. 180 + 25 + 2.8 = Rs. 207.8 (Profit to the agency houses is Rs. 249 - 207.8 = Rs. 41.3)
Total	Rs. 152.7	Rs. 96.3

Sources: BA HC2 188 170 and BA HC2 2.352, LMA MS09936, Chowdhury, *Growth of Commercial Agriculture*, Roy, "Indigo and the law," Ray, *Bengal industries and the British industrial revolution*, David Chilosi and Giovanni Federico, "Asian globalisations: market integration, trade and economic growth, 1800-1938," Dharma Kumar et al, eds. *The Cambridge economic history of India. Vol. 2, C. 1757-1970* (Cambridge University Press, 1983).

Notes: Cultivation costs: Chowdhury estimated Rs. 3.3 per bigah (1 bigah is 1/3 of an acre). Ray estimated Rs. 2.5 per bigah. Roy estimated 1 bigah produced 9 bundles of leaves, with 200 bundles needed for 1 maund of indigo cake. The estimate was Rs. 2.5 x 22 bigahs = Rs. 55.

Costs for the leaves: Roy estimated Rs. 2 per bigha, Chowdhury Rs. 4 per bigha for the best leaves. The estimate was Rs. 3 x 22 = Rs. 66.

Production costs: Ray estimated fixed costs Rs. 23.15 per maund, and variable capital of between Rs. 80 to 145 per maund inclusive of the leaves. In this example Rs. 110 is used, of which Rs. 66 is deducted.

Transport costs: Estimated at Rs. 0.06 per ton mile by boat, with steamboats Rs. 0.12. Krishnangar is 83 miles from Calcutta.

Freight, insurance, London warehousing and brokerage fees were taken from tea broker, Thompson and Co., account of costs and services in 1856 which estimated these to be 8 - 10 per cent of the total London sale price per shipment. In this estimate the higher bound of 10 per cent is used.
See the glossary for weights and measures conversions.

3.4.2 The zerat system of production

The other system used for the production of indigo was known as zerat. This involved the factory owners purchasing or renting land directly from zamindars (land owners), directly hiring labour, and subsequently undertaking both the cultivation and production processes directly. The purchase of land for cultivation occurred mostly along the alluvial plains of the river Ganges in the province of Bihar. This land was suitable for indigo growing and also far less settled and therefore easier to purchase than the heavily populated lands in Bengal.

The ryoti system was initially preferred because in this system the costs of production were lowered for the factory owners who shifted much of the risk of cultivation on to the peasant cultivators.[181] Prior to 1833 Europeans were also legally prevented from directly owning land, which forced the use of sub-contracting arrangements with Indians. However, the zerat system gradually gained in popularity. By 1860 Ray estimated that 30 per cent of indigo production in Bengal and Bihar occurred under the zerat system.[182]

The more widespread adoption of the zerat system has been explained as a result of the breakdown in the relationship between peasants and factory owners. The low margins available to the peasants encouraged them to take the advances from the factory owners but switch to grow more valuable crops instead of indigo. The hold-up experienced by the planters when the leaves were not delivered left them severely compromised. The efforts to compel fulfilment of the contracts saw violent protests erupt in 1860 against the factory owners' brutal methods.[183] This

[181] Chowdhury, *Growth of Commercial Agriculture*, 212. Ray, *Bengal industries and the British industrial revolution*, 237, found that on average, cultivation under the zerat system was 40 per cent more costly than under the ryoti system.
[182] Ray, *Bengal industries and the British industrial revolution*, 224. Bihar, where the zerat system dominated, accounted for 30 per cent of the total indigo crop in 1860.
[183] The factory owners were widely accused of using brutal methods of coercion. Roy, "Indigo and the law," argued that the key problem with the ryoti system lay in the weakness of the commercial contracts between the factory owners and the peasants, which were legally limited.

signalled the breakdown of the ryoti system in Bengal, hastening the adoption of the zerat system.

Roy, however, described the choice between the systems as a ‘make-or-buy’ decision, with the contracting (buy) ryoti system initially offering superior returns than the zerat (make) method to the planter, but the threat of hold-up from the peasants encouraged the increasing use of the zerat system.[184] The market conditions may have also influenced the change in the systems, with the annual volatility in production encouraging efforts to find a method that offered greater control over the production process. The integration of the cultivation process by the factory owners, did though, significantly change the commodity chain and the transactions undertaken by the participants, as well as the distribution of costs and profits.

The zerat system increased the need for capital in order to obtain the land and equipment for cultivation. The trading firms increasingly contracted these loans with the factory owners in return for the direct consignment of indigo in repayment. The indigo was owned by the trading firms on leaving the factory gates and could be taken for direct sale in London, rather than purchased through the Calcutta auctions. Once the indigo was sold in London, the value of the loan, interest and other commission fees were deducted from the revenue and the remaining profit remitted back to the factory owner.

The results of these changes are shown in table 7 which uses data from 1855 to develop a model of costs and profits in the zerat system. The model shows that once the firms integrated the cultivation process these costs now accounted for 52 per cent of the total cost of a maund out of the factory. The production process now accounted for 36 per cent of the total costs. The financing costs declined in this model to account for the lower costs of credit passed on to the factory owners through direct contracts with the trading firms.

[184] Roy, “Indigo and the law,” 62.

Table 7. Costs and profits under the zerat system, 1855

Process	Costs	Profits
Indigo leaf cultivation	Cultivation costs for zerat system: for 1 maund of middle quality leaves Rs. 88.	
Manufacturing process to finished indigo cakes	Fixed and variable production costs: 1 maund at factory cost is Rs. 88 (leaves) + 23 (fixed capital investments) + 7 (finance costs) + 30 (variable costs) = Rs. 148	
Transport to Calcutta and storage	Freight costs: Purnea (area of highest indigo production in Bihar) to Calcutta estimated at Rs. 1.8 by steam boat.	
Shipping to Britain and storage	Insurance, freighting, tariffs and storage costs were estimated between 8% of the final London price, in this example Rs. 17 per maund from the sale price of Rs. 219.	
Public auction	Price achieved in London auction in 1855: S.d 5.3 for middling quality middling per lb (converted to Rs. 219 per maund). Brokerage fees of 1% or Rs. 2.2 per maund.	Cost of 1 maund at London auction is Rs. 148 + 18.8+ 2.2 (Profit for the trading partnership is Rs. 219 - Rs. 169 = Rs. 50.)
Total	Rs. 169	Rs. 50

Sources: BA HC2 188 170 and BA HC2 2.352, LMA MS09936, Chowdhury, *Growth of Commercial Agriculture*, Roy, *Indigo and the law*, Ray, *Bengal industries and the British industrial revolution*, Chilosi, and Federico, "Asian globalisations: market integration, trade and economic growth, 1800-1938," Kumar, et al eds. *The Cambridge economic history of India*.
Notes: Cultivation costs: Ray provided two estimates, a general average of Rs. 3.48 for zerat, and Rs. 6.61 for the Bengal Indigo Co. for production under the zerat system, both per bigah. The estimate was for Rs. 4 x 22 = Rs. 88.
Production costs: The fixed capital investment of Rs. 23.15 is maintained, as there was no significant change to the physical assets required in the system. The variable costs were increased to Rs. 125 to account for a degree of inflation, giving the total variable costs as Rs. 125 minus the costs of cultivated leaves Rs. 88, leaving Rs. 37.
Transport costs: Estimated at Rs. 0.06 per ton mile by boat, with steamboats Rs. 0.12. Purnea to Calcutta is 283 miles.
Freight, insurance, London Warehousing and brokerage fees were taken from tea broker, Thompson and Co., account of costs and services in 1856 which estimated these to be 8 – 10 per cent of the total London sale price per shipment. In this estimate the lower bound of 8 per cent is used to account for a decline in the costs of transport and removal of tariffs.

There was a decline in the average cost of shipping from £5.83 to £3.50 per tonne of indigo over the period and the British government removed import tariffs in 1846 which further lowered the costs of moving the indigo to Britain.[185] Comparing the two estimates for 1835 and 1855, the cost per maund once it reached London for sale had increased, whilst the price per maund had decreased, however the profits generated in London increased from Rs. 41 to Rs. 54 per maund, as transaction costs were reduced. The trading firm, once it had taken its repayments, commissions, and fees also ensured that much of the profit remained in their pockets, although all the costs were now also effectively absorbed by the trading firms in their position as banker.

This analysis offers an alternative explanation for the transition to the zerat system. The removal of two significant transactions through the integration increased scope to control and lower costs and more effectively coordinate the flows of information and finance through the chain. This may also explain the improved coordination in the industry after 1850, as shown in figure 4. The increasing capital requirements, and the role played by the trading firms in providing it, may have also encouraged the trading firms to reconsider the balance of costs and profits and reconfigure the structure of the transactions to ensure they extracted most of the profit.

[185] Chilosi and Federico, "Asian globalisations: market integration, trade and economic growth, 1800-1938."

3.5 The role of the trading firms

The commodity chain shows that a stable, relatively small number of trading firms in Calcutta, with a corresponding number in Britain, coordinated indigo sales in Calcutta and London, between the many producers and buyers of indigo. For a relatively small outlay the trading firms could extract a large portion of the profits. This raises various questions; why did the factory owners allow the trading firms to take such a large share of the profits; why did the producers not integrate forward and transact directly with British buyers; why didn't more trading firms enter the sector to take advantage of these opportunities?

The volatility in production and prices created significant risks for factory owners and trading firms alike. The violent swings in prices within a season could easily ruin the trading firms if they bought and sold at the wrong time. To reduce these risks the trading firms had to make significant investments, so although they had minimal fixed costs directly tied to indigo production, they amassed them in other areas. In particular there were substantial investments in managing the flows of information and finance.

The factory owner in Bengal and the end-buyer in London were separated by 10,000 kilometres, and communication was restricted to letters that moved at the speed of the ships. Average sailing times between London and Calcutta did decline significantly between 1820 and 1850, falling from 154 to 47 days, but this still left participants waiting around three months for a full circle of correspondence to complete.[186] To coordinate the sale the buyers needed information on the levels of production, the quality of the produce and prices in India. Conversely the factory owners wanted to know the levels of demand and possible prices in Britain and Europe. Coordinating these flows of information successfully was a major determinant of success for all the actors in the chain. Failure to judge market conditions often led to oversupply and subsequent low prices.

[186] Kaukiainen, "Shrinking the world," appendix 1 and 2.

This information could change rapidly and was influenced by a range of factors. On the supply side, the total indigo crop and its quality were difficult to predict due to the influence of weather on the harvest. Demand for indigo was determined by fluctuations in the textile centres. The capacity to obtain and utilise this information afforded an arbitrage opportunity for an intermediary. The trading firms and their corresponding firms in Britain had access to a wide network of informants including planters, auctioneers, brokers, and textile manufacturers. These networks allowed information to be rapidly circulated, allowing the trading firms to leverage knowledge of the different markets. To undertake this work the trading firms had to attract capable partners and build networks to ensure the information flowed. The associated costs and difficulties of the work were beyond the scope of many factory owners in Bengal.

3.5.1 Improving access to credit and capital

The coordination role was also critical in generating and managing the flows of credit and capital required throughout the chain. The factory owners needed capital to fund the initial investments in the building of the factories. Regular credit was then required to fund the advances for the peasants and undertake the rest of the production process. The structure and fluctuations of the indigo sector presented further challenges in terms of financing. Kling found that "indigo was inelastic in production and fluctuation in demand had to be absorbed in price."[187] The year-on-year volatility and threats of prolonged low prices meant the factory owners needed capital reserves or access to credit to see them through the slumps.

Kling and Prakash identified two common characteristics amongst British indigo factory owners: first the speculative nature of the industry tended to attract Europeans who were looking to 'get rich quick' and were devoid of capital.[188] Second, those owners who were successful normally sought to make repatriate the profits to Britain.[189] Therefore, most factory owners were

[187] Blair Kling, *Partner in Empire: Dwarkanath Tagore and the age of enterprise in Eastern India* (University of California Press, 1992), 228.
[188] Ibid, 228.
[189] Prakash, *Facing competition*, 26.

reliant on accessing capital and credit from external sources, whilst capital flowed out of India rather than allowing for local capital formation and subsequent reinvestment.

There were well-developed credit systems established in various parts of India, with credit instruments such as hundis, similar to bills of exchange, which allowed both local and regional sources of credit to circulate. However, this credit was predominantly absorbed by the local agricultural sector and the flow determined by the agricultural calendar.[190] Little credit or capital was available to be lent to other sectors that functioned with different terms and structures of lending. This system remained distinct from the European trading system in the presidency cities.

In the period immediately after 1813 access to credit in Calcutta was limited. Although the Bank of Calcutta (subsequently the Bank of Bengal) had been launched in 1806, the scope of local banking activity in Calcutta was restricted and predominantly linked to funding the activities of the EIC.[191] Larpent described the system that evolved in these years, "the Natives lend money upon promissory notes of the commercial houses, at short periods of from three to twelve months … there being no usury laws, the rate of interest or discount was in the proportion of the wants of the houses borrowing, and to its credit. Some of those notes, of houses partially out of credit, had been as high as 10 to 15 per cent."[192] Credit raised in this way was relatively expensive and predominantly short-term.[193]

The larger, more reputable trading firms could, though, obtain better rates than individual factory owners. This encouraged the trading firms to intermediate in providing both credit, through

---

[190] A.R.Kulkarni, "Money and Banking under the Marathas: Seventeenth century to AD 1848," in *Money and credit in Indian History,* ed. Amiya Kumar Bagchi (Tulika Books, 2002).
[191] 1833 Report from the Parliamentary Select Committee on Manufactures, 130. Larpent noted that, "this position operated sometimes prejudicially upon the money market, occasioning great and sudden changes, deranging commercial operations."
[192] Ibid, 129.
[193] A thin market is characterized as having few buyers and sellers resulting in reduced liquidity, with greater spread and volatility in prices. The Calcutta credit market certainly shared these characteristics in the period before 1850.

advances, and capital, through longer term loans, to the factory owners.[194] In return the producers consigned or hypothecated the crop to the trading firm who would subsequently manage the sale at auction with the revenues covering the loans.

This situation also encouraged the larger agency houses to take on other banking activities such as holding deposits, issuing notes and discounting bills. This allowed the firms to largely circumvent the local credit market, using the deposits to provide credit to the indigo factory owners.[195] Although providing much needed credit this system created significant problems for the agency houses, as they had to coordinate a range of assets and liabilities with different term structures. The loans and repayments were linked to the indigo season, whilst the deposits and their interest obligations were not. Synchronising these flows with the firms' other liabilities from banking and seasonal trade activities was a challenge, which, if failed, could have fatal consequences.

The banking system in Calcutta developed slowly after 1830 but became an increasingly important source of short-term credit in the indigo sector.[196] The Bank of Bengal and the newly-founded Union Bank offered various channels for obtaining credit, through loans on the deposit of collateral, as well as discounting private and government bills.[197] The rate of interest on credit for indigo, shown in figure 7, was volatile, ranging from between 6 per cent to 12 per cent throughout the 1840s and 1850s. Credit was secured upon the deposit of indigo, or rights to the next indigo crop, with the bank.

---

[194] Chowdhury, *Growth of Commercial Agriculture*, 83, noted that in 1827 Bengal indigo producers required Rs. 2 crores (Rs. 20,000,000, £2,000,000) annually as advances; of this Rs. 160 lakh (Rs. 16,000,000, £1,600,000) was provided by the six largest agency houses.

[195] See chapter 4.2.1 and the Palmer and Co. case study for a full discussion of the agency houses banking operations.

[196] Kling, *Partner of empire*, provides a good history of the Union Bank, founded in 1829 as a joint-stock venture with shareholders drawn from the European and Indian mercantile community.

[197] Amiya Bagchi, *The evolution of the state bank of India, Part 1 1806–1860* (Oxford University Press, 1987), annexure 7.1, Private merchants' bills, as distinct from government bills, were discounted by the Bank of Bengal at a rate that was usually 1 per cent higher than for indigo. In 1841 the respective rates were 8 per cent and 7 per cent, in 1850 9 per cent and 7.5 per cent.

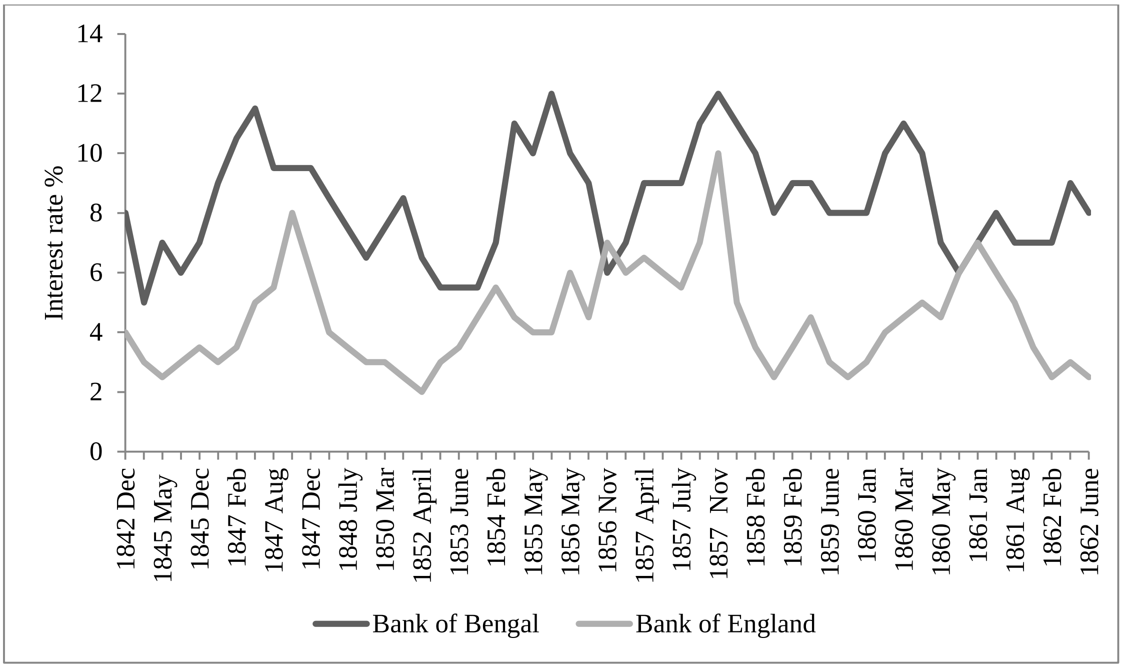

Figure 7. Bank of Bengal and Bank of England interest rates, 1842 to 1862.
Sources: The data is taken from annexure 7.1, Bagchi, *The evolution of the state bank of India, Part 1 1806–1860,* and from John Clapham, *The Bank of England Vol.2* (Cambridge University Press, 1966), 429–432.
Notes: The Bengal data is the rate of interest on credit when indigo was provided as the collateral on the loan. The data points in the chart were selected from the months when there was corresponding data in both the Bank of England and Bank of Bengal series.

The Union Bank was founded to fund the indigo sector, with its main investors and directors drawn from the largest trading firms with indigo interests. Kling estimated that two thirds of the bank's entire capital was loaned to four firms whose primary business was indigo.[198] The bank's success was dependent on indigo prices remaining resilient, a strategy that had obvious weaknesses as prices were generally falling over this period. As Kling noted, "the more they [prices] declined, the more capital that had to be borrowed to keep them (indigo factories) in operation; the more capital borrowed, the more indigo had to be contracted for – thus flooding the market and keeping marginal concerns in operation."[199]

The Union Bank was effectively a venture through which indigo traders sought to diversify their risks, resulting in overexposure to a single, volatile market. The failure to develop robust lending

[198] Kling, *Partner of empire*, 212.
[199] Ibid, 213–214. Shareholders were not unaware of this issue and various attempts were made to challenge the policy of indigo dependence, but through obfuscation and outright fraud the directors avoided a serious inquiry into the bank's affairs.

policies created an unsustainable credit system brutally exposed in the financial panic of 1847.[200] This ruined the Union bank and in the subsequent crisis a further 16 firms in Calcutta failed.[201] The more conservative Bank of Bengal survived the fallout due to its tighter policies on loans; it discouraged renewals, whilst ensuring that collateral against the loans was viable.[202] Whilst more rigorous and risk-averse than the freewheeling Union Bank, the restriction on renewals impacted the capacity to lend for longer term investments. The directors also sought to reduce risk by lending to parties they knew personally, which restricted access to those with established relationships at the bank. This favoured lending to well-established trading firms with collateral and contacts, further ensuring they were central to the coordination of finance.

The limitations of Calcutta's financial system encouraged the trading firms to look to external sources for cheaper, more reliable lines of credit. Relationships with similar firms in Britain gave the trading firms access to the developed financial markets in London. The interest rates in Britain were generally lower than in India, as shown in figure 7, which meant that credit and longer term capital could be obtained more cheaply.[203] British-based trading firms could advance credit to those in Calcutta, either funded from their own capital or drawing on local banking sources.

Merchant banks in London, led by Barings and N.M.Rothschild and Sons, also increased their involvement with trading firms in the first half of the 19th century. These banks provided short-term trade credit and longer-term funds for investment, whilst using relationships with trading firms to trade on their own account.[204] These arrangements created a cycle of credit, often in the

---

[200] The genus of the 1847 crisis lay in Britain where speculation in the grain market saw credit collapse throughout the mercantile community leading to a sudden lack of liquidity in the financial markets.
[201] Bagchi, *The evolution of the state bank of India,* chapters 6, 7, 8, details the fallout of the 1847 crisis.
[202] Bagchi, *The evolution of the state bank of India,* 180.
[203] Although the rates at the Bank of England would have been lower than those for commercial credit providers, they would represent a baseline rate for lending far lower than in Calcutta. The restrictions on the opening of joint-stock banks in Calcutta, volatile nature of the market, risk of business default, and the costs of remitting funds, were factors that restricted the supply and increased the costs of credit and capital in Calcutta.
[204] Philip Ziegler, *The Sixth Great Power: A History of One of the Greatest Banking Families, The House of Barings, 1762–1929* (Knopf, 1988), Stanley Chapman, *The rise of merchant banking* (George Allen and Unwin, 1984), chapter 2.

form of bills of exchange sent to India and goods consigned back to London, which overcame the dearth of credit in Calcutta.

The trading firms could transact for finance more effectively than the factory owners due to their networks and contacts in Calcutta and London. Taking on these responsibilities did, however, mean that the trading firms had to develop mechanisms for managing these transactions and the risks of default with the factory owners. The relationships with external providers, including the partner firms in Britain and merchant banks, also needed to be arranged and managed.

3.6 The influence of market structure on firm organisation

The growth in the scale and value of the Anglo-Indian trade after 1813, driven by opportunities in the risky yet profitable trade in indigo, encouraged hundreds of new entrants into indigo production. The trading firms managed the sale of indigo but also coordinated and generated the flows of information and credit. The level of investment and development of the capabilities to undertake these activities were costly and difficult to replicate. This restricted forward integration by the producers and acted as a barrier to entry for new trading firm entrants. This ensured that the indigo market in Calcutta remained concentrated, with around 30 trading firms able to exert significant control over the market and extract profits.[205]

The constraints within the chain, volatility in production, and structure of the market incentivised the gradual switch from the ryoti to zerat system. This removed various transactions and changed the distribution of costs and profits, reconfiguring the make or buy decisions made by the trading firms. These changes encouraged trading firms to experiment with structures that internalised the entire chain.[206]

Economic theory and historical precedent suggest that trading firms in the late 18th and 19th centuries acted predominantly as intermediaries in the buying and selling of products. They were

[205] Williamson, *Markets and hierarchies*, 27. When sellers are confronted with a small number of counterparties the opportunity of buyers to exert opportunistic control over the exchange increases.
[206] See Chapter 5.4 for description of Gisborne and Co. and Chapter 8.3 for Gillanders and Co's expansion into indigo production.

organised as partnerships that utilised short-term trade credits to fulfil their financial requirements, and made limited capital investments. Theoretically these trade transactions had characteristics that would encourage market governance. The need to manage distant agents encouraged the use of governance to reduce opportunism, best enabled by the partnership form.

However, the firms in Calcutta problematize these assumptions as they extended their activities beyond simple market intermediation. Two critical factors affected the firms. First, Calcutta's capital and credit markets were thin with related high transaction costs which led to the internalisation of banking activities. Second, volatility in indigo production led to difficulties in coordination and synchronization of credit and information flows, which also encouraged integration. These decisions changed the characteristics of the transactions undertaken by the firms and predict the use of different governance mechanisms. The Calcutta commercial directories can be used to analyse how the firm's organisation and ownership changed in response to the new transactions.

3.7 Quantifying the agency houses and trading partnerships

Rescinding the monopoly had been undertaken to encourage free merchants to enter the trade and between 1813 and 1868 the Calcutta directories show a steady rise in the number of active merchants. Figure 8 shows the growth from 25 firms in 1813 to 169 in 1868. There was a steady increase with two periods of volatility around the crisis of 1847 and after the mutiny in 1857. However, the crisis of the early 1830s sparked by the collapse of the six principal agency houses and ensuing financial panic actually showed an increase in the number of trading firms in Calcutta.[207]

[207] The six firms were: Alexander and Co., Colvin and Co., Cruttenden, Mckillop and Co., Fergusson and Co, Mackintosh and Co., Palmer and Co. and Scott and Co.

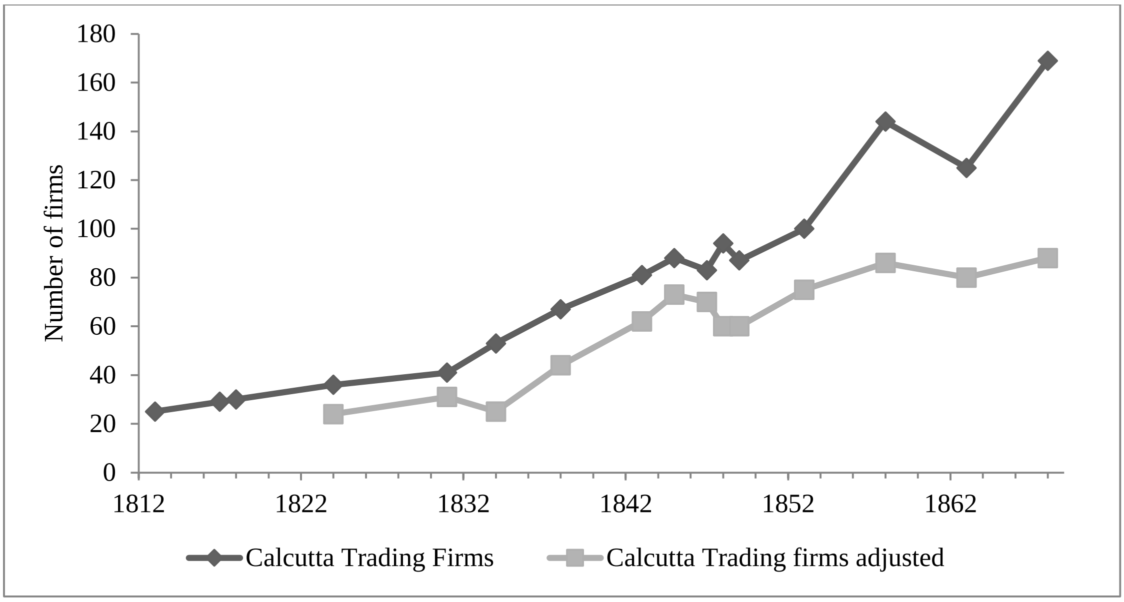

Figure 8. The number of trading firms and merchants in Calcutta in benchmark years, 1813 to 1868.
Sources: British Library (BL) OIR 954.14 ST 1216 CH Bengal Annual Register and Directory (variously named) from 1813, 1817, 1818, 1824, 1831, 1834, 1838, 1843, 1845, 1847, 1848, 1849, 1853, 1858, 1863, 1868.
Notes: The first series, Calcutta trading firms, was a simple count of all trading firms in the registers for benchmark years. The second series, Calcutta trading firms adjusted, took out all the firms that had only a single partner listed. This was done to identify partnership firms, rather than sole-proprietors. As partners were not named until 1824 the adjusted series starts in that year. See appendix 1 for discussion of the data in the registers.

This encouraged a revision of the data. An adjusted series was calculated which removed sole-proprietors and individual agents to leave only firms with multiple partners; in effect partnership firms. This series significantly reduced the number of firms from 24 in 1824 to 88 in 1868. It also showed a decrease from 31 in 1831 to 25 in 1834, conveniently accounting for the six failed principal agency houses. The crisis of 1847 also appears as a more significant event in the adjusted series, showing a decline from 73 firms in 1845 to 60 in 1849. The trend of the adjusted series corresponds well to the historical narrative and confirms the consensus that there were in the region of 25 to 30 agency houses active prior to 1830.[208]

The rise in the total number of firms was particularly sharp after financial crises in the 1830s and 1847. This can be attributed to two factors. The removal of large incumbent firms

[208] Tripathi, *Oxford History Indian Business,* 47 and Singh, *European Agency Houses in Bengal*, 10,

encouraged new entrants into the market, whilst partners from failed firms attempted to re-establish themselves, often as sole-proprietors.[209] The rising number of sole-proprietors and individual agents was a notable trend, rising from 12 in 1824 to 81 in 1868. Individuals such as Reginald Shawcross, listed in 1863 as the agent for 'John Mayall of Mosely, Cotton Spinner and Merchant,' became more common in later years.[210]

3.7.1 Size and structure of the firms

Data on capital accumulation, one metric widely used to analyse the size of such firms, is scarce as there was no systematic reporting of such figures. Chapman showed that trading firms in India and Asia were able to survive and compete with various levels of capital, and to significantly increase their reserves during the 19th century.[211] However, he had only six examples, too small a number to establish meaningful trends.

The data in the registers is instead used to proxy size and capacity, using the number of partners for the size of the firms. Theoretically each partner would invest capital and also add to the human capital of the firm, so a greater number of partners would be indicative of larger scale firms. This is, though, a problematic metric; some firms may have had large numbers of partners who invested relatively small amounts of capital or vice versa. Likewise, firms with small numbers of partners may have been more successful and better able to accumulate capital. The decision to increase the number of partners may have also been for non-business factors, such as employing family members, which added little additional capacity to the firm.[212]

There are, though, extensive examples of partnership contracts that detail the investment made by partners on joining, or alternatively partners being taken on to improve the human capital of

[209] For example, BL Bengal Annual Register, 1834, listed John Palmer of the failed John Palmer and Co. as an independent merchant.
[210] BL Bengal Annual Registers, 1863 and 1868.
[211] Chapman, *Merchant enterprise*, 313, found that Jardine and Matheson's capital rose from £1.47 million in 1836 to £2.17 million in 1870. James Finlay's from £200,000 to £450,000 between 1860 and 1870, whilst Harrison and Crossfield's from £8,000 in 1844 to £140,000 in 1863.
[212] Andrea Colli, *The History of Family Business, 1850–2000* (Cambridge University Press, 2003). Found that interests of family firms often went beyond profit generation, such as providing employment for family members.

the firm. Based on this evidence and the wider literature on partnership formation it is reasonable to assume that the number of partners has some correlation to the size and capacity of the firm.[213] Using this data enables a comparison of the firms' size over time, allowing the thesis to delineate differences between the number of relatively large and small firms. This provides a useful but very rough estimate of the size of the firms in terms of their financial capacity and human capital.

Using the number of partners from the adjusted series, figure 9 shows the average number of partners per firm and the maximum number of partners in a single firm in each benchmark year. The mean average was very consistent, at close to three partners per firm, throughout the whole period. The maximum number of partners per firm was a more volatile trend, ranging from four to ten. The largest firm in 1845 was MacVicar, Smith and Co., which had nine partners. In 1868 Graham and Co. listed ten partners. Both, though, were outliers; in 1845 the next highest number was six and five in 1868. The trends in firm size were closely correlated to the financial crises, with a decline in the size of the largest firms in the early 1830s and after 1847.

[213] Cottrell, *Industrial finance*,10. "New partners being recruited either to increase a firm's financial resources or provide management and technical skills." Naomi Lamoreaux, "Constructing Firms: Partnerships and Alternative Contractual Arrangements in Early-Nineteenth-Century American Business." *Business and Economic History*, 24 (1995). New partners were sought to bring in various inputs, including labour, capital and new capabilities.

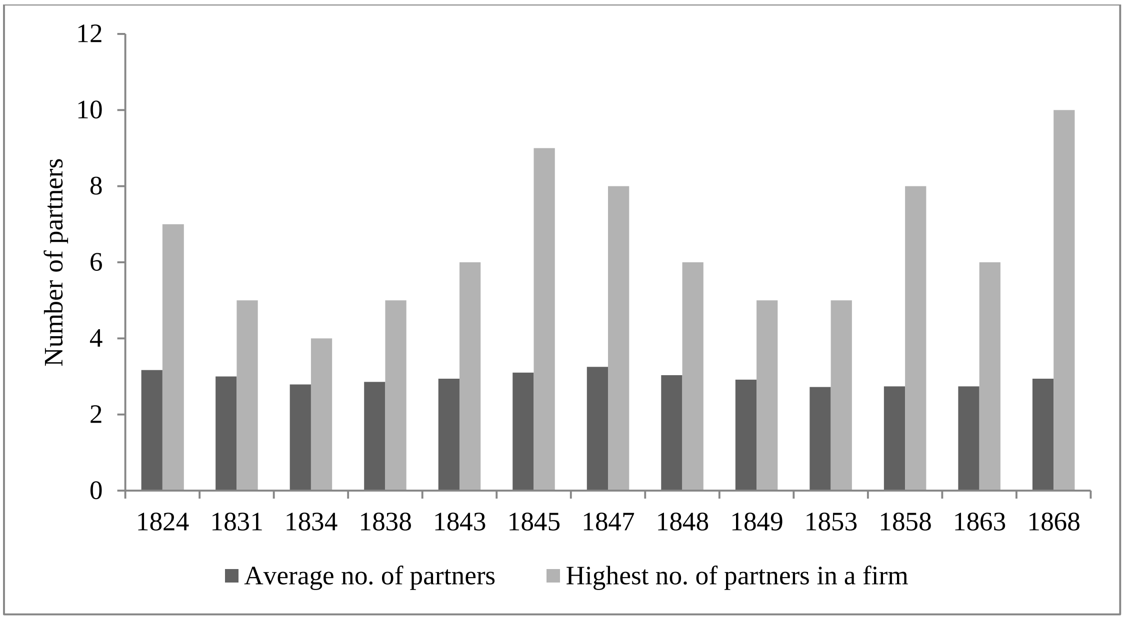

Figure 9. The mean average and maximum number of partners in trading firms, 1824 to 1868.
Sources: BL Bengal Annual Registers from 1824, 1831, 1834, 1838, 1843, 1845, 1847, 1848, 1849, 1853, 1858, 1863, 1868.
Notes: The mean average was derived from all partnership firms in a given year. The maximum number was taken from the firm in the given year with the most partners. The firms included are from the adjusted series of Calcutta trading firms.

Another way to measure the change in size is to look at the number of partners per firm aggregated in bands to distinguish between sole-proprietors, small firms of two to three partners, medium firms with four to five partners and large firms with six or more partners. In table 8 these bands are shown as a percentage of the total number of firms in each benchmark year. This shows spikes in sole-proprietor firms in the years following financial crises, and a more sustained increase after 1853. There was also a noticeable increase in larger firms in the early 1840s as the number of firms with four to five partners was raised from 13 per cent of the total in 1838 to 23 per cent in 1845.

Table 8. The number of partners per firm in aggregated bands, 1824 to 1868

	1 (%)	2 to 3 (%)	4 to 5 (%)	6 plus (%)
1824	33	44	19	3
1831	24	59	17	0
1834	47	40	13	0
1838	34	52	13	0
1843	23	56	20	1
1845	17	58	23	2
1847	16	59	23	2
1848	36	45	18	1
1849	31	55	14	0
1853	25	62	13	0
1858	40	52	6	1
1863	36	50	14	1
1868	48	41	10	1

Sources: BL Bengal Annual Registers from 1824, 1831, 1834, 1838, 1843, 1845, 1847, 1848, 1853, 1858, 1863, 1868.
Notes: The number of partners per firm was aggregated into bands of 1, 2 to 3, 4 to 5, and 6 or more. The number of firms in each band is expressed as a percentage of the total firm population. The firms included are from the unadjusted series of Calcutta trading firms.

The second measure of firm size is the total number of partners and assistants. The assistants undertook managerial work and were not clerks or secretaries. The partners can be regarded as senior managers whilst the assistants held middle management positions. The combined number of partners and assistants captures the size of the firms' total managerial capacity, and indicates the scale of the operations the firms could conduct.

Analysis of the size of the firms by this measure reveals similar trends to those shown in the number of the partners. In figure 10 the average number of assistants and the subsequent average total managerial size of the firms are presented. Both of these figures, like the average number of partners, are stable over the period of 1843 to 1868 with an average of around two assistants and a total managerial capacity of five managers per firm. One notable trend though, was an increase in the highest reported number of both assistants and total managerial capacity towards the end of the period.

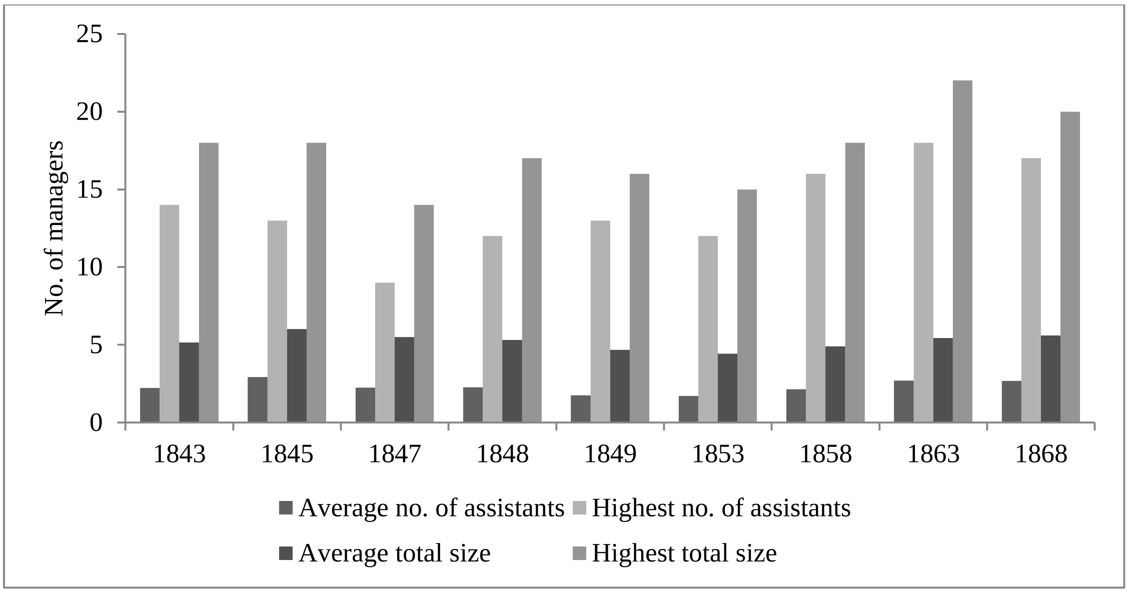

Figure 10. The average and maximum numbers of assistants and average and maximum total managerial capacity in trading firms, 1843 to 1868.
Sources: BL Bengal Annual Registers from 1843, 1845, 1847, 1848, 1849, 1853, 1858, 1863, 1868.
Notes: The assistants of the trading firms were first listed in 1843. The mean averages were derived from the number of assistants and the total was the sum of assistants and partners in a given year. The maximum number of assistants and the maximum total was taken from the firm with the most assistants and largest sum of assistants and partners in a given year. The firms included are from the adjusted series of Calcutta trading firms.

The total managerial capacity is also bracketed into bands and presented as a percentage of the total firm population in each benchmark year. In this case the bands, again differentiating between small, medium and large firms, are two to five managers, six to nine managers, ten to thirteen managers, fourteen or more managers. The data is drawn from the adjusted series, so all sole-proprietors have been removed. As shown in table 9, there is a similar trend to those seen in the number of partners per firm. The increase in larger firms in the early 1840s, with almost 50 per cent of firms having over six managers in 1845, was followed by a sharp decline in the years after 1847, with the percentage of firms with over six managers declining to 25 per cent in 1853. There was again some increase in larger firms in the 1860s.

Table 9. The total managerial capacity of trading firms in aggregated bands, 1843 to 1868

	2 to 5	6 to 9	10 to 13	14 plus
1843	66	21	8	5
1845	52	33	12	3
1847	59	30	10	1
1848	62	30	7	2
1849	68	28	2	2
1853	75	21	3	1
1858	71	26	2	1
1863	61	29	9	1
1868	75	17	6	2
1868 adjusted	72	16	8	4

Sources: BL Bengal Annual Registers from 1843, 1845, 1847, 1848, 1849, 1853, 1858, 1863, 1868.
Notes: The total number of managers per firm was aggregated into bands of 2 to 5, 6 to 9, 10 to 13 and 14 or more. The number of firms in each band is expressed as a percentage of the total firm population. The firms are drawn from the adjusted series of Calcutta trading firms. The removal of sole-proprietor firms in this series created a problem as a number of these firms in 1868 had several assistants. An adjusted figure is also shown for 1868 which includes the sole-proprietor firms with multiple assistants.

The increase in the number of larger firms prior to 1831 and during the early 1840s shows that periodic efforts were made to increase the size of the capital reserves. However, the largest firms in terms of total managerial capacity were predominantly formed by increasing the number of assistants. This suggests that a number of the firms had attempted to increase the scale of operations without deepening their capital base, potentially leaving them undercapitalised.

Table 10. Summary statistics of the size and scope of the trading firms

	Partners	Assistants	Total Managers
Minimum	1	0	1
Maximum	10	18	22
Mean	2.9	2.3	5.2
Coefficient of variation	0.06	0.17	0.09

Sources: BL Bengal Annual Registers from 1813, 1817, 1818, 1824, 1831, 1834, 1838, 1843, 1845, 1847, 1848, 1849, 1853, 1858, 1863, 1868.

The larger firms that emerged in the 1820s and mid-1840s appear more unstable and prone to failure during the periods of financial crises. The efforts to expand the scale of operations but failure to adequately capitalise them is one plausible cause of this instability.

Another was that the firms could not obtain enough good managers and lacked the capabilities and systems to effectively coordinate the growing numbers of partners and assistants. This resulted in poor decision making, in particular bad management of the firms' portfolios leading to overexposure to the volatile indigo market.

The sources show that there were continued efforts to increase the scale of capital and managerial capacity across the period, possibly as a response to new opportunities. Yet the stable mean number of partners and total managerial capacity is suggestive that there was an efficient size of firm, whereby three partners could provide the capital required to enter the market and operate effectively.

3.7.2 Organisation of international trade

A further important characteristic of the trading firms in this period was the structure they adopted for coordinating their activities between different geographic regions. The registers reveal three different strategies were used by the firms to link their operations: Partnerships with another firm, placing partners abroad and working with agents.

Prior to the 1830s the agency houses maintained strong relationships with corresponding firms in Britain.[214] The majority of the benchmark registers included a list of East India houses of agency in London. The series of London firms, shown in figure 11, reveal a fairly constant range of between 20 and 30 firms active between 1813 and 1845. This number dramatically expanded after 1845, with 27 firms recorded in that year and 77 in 1847.

One possible explanation for this increase was a change in the recording method used to compile the lists. Another plausible explanation relates to the financial crisis of 1847, in which the

[214] Tripahti, *Oxford History of Indian Business*, 46.

bankruptcy of various trading firms in London saw partners restart, either on their own or in smaller firms. This trend could have been exacerbated with the return to London of partners from Indian firms that had also failed. Such a sharp increase in only a year, and its timing, suggests that all of these factors may have contributed. What is clear, though, is that the number of firms in Calcutta and London involved in the Anglo-Indian trade were closely correlated.

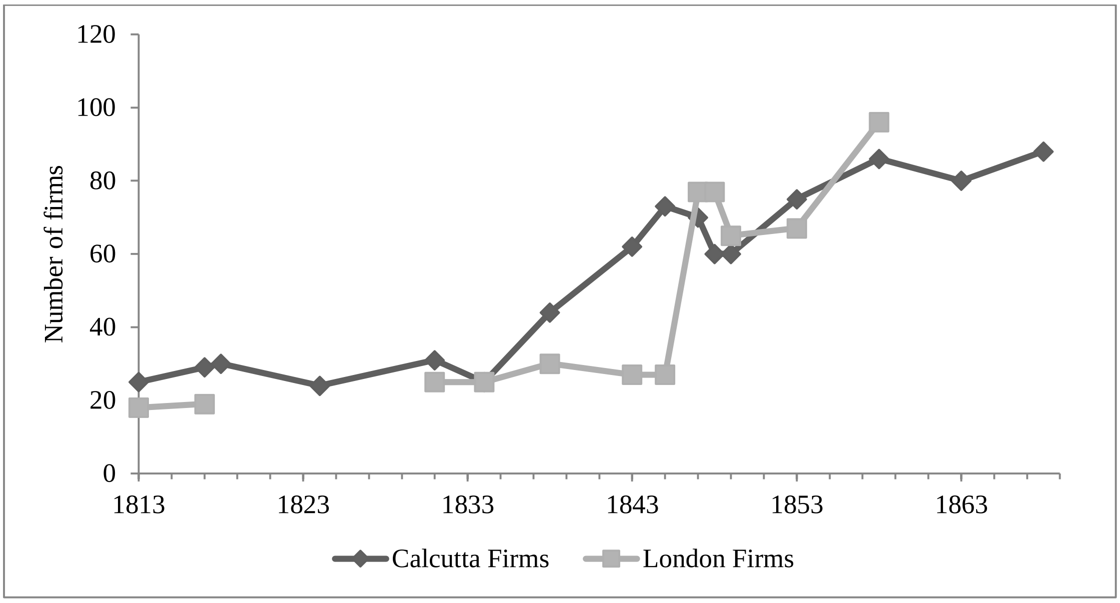

Figure 11. The number of East India Agency houses in London, 1813 to 1868.
Sources: BL Bengal Annual Registers from 1813, 1817, 1831, 1834, 1838, 1843, 1845, 1847, 1848, 1853, 1858.

In the last three benchmark registers, new methods emerged for managing international relationships. An increasingly large number of the firms were listed as being the agent or representative for British based firms or, conversely having an agent or representative abroad. In 1858, 72 of 144 firms listed such a relationship with one or more firms in the UK. It is clear that some were effectively the same firm linked by common partners or family members. For example Carlisle, Nephews and Co. of Calcutta was recorded as having Carlisle Brothers and Co. of Manchester and Richard Carlisle and Co. of Liverpool as its British agents. Some, like Apcar and Co. which listed T.A.Gibbs of London as their British agent, were completely separate firms.[215]

[215] BL Bengal Annual Register, 1858.

Finally, analysis of the partners of the Calcutta firms showed an increasing number were designated as being located outside India. In 1831 five of 31 firms listed partners outside India and after the crisis in 1834 only one of 25 firms had an external partner. However, by 1843 40 per cent of firms had partners out of India, a figure which continued to expand until by 1863 67 per cent of the firms had an external partner. Most were listed as being in Europe or England, but some were located in China or other international markets.

The model established in the early 19th century by the agency houses of cooperation with corresponding firms in Britain, continued after the 1830s as shown by the dramatic increase in East India houses in London. However, the strategy and structure for these activities showed significant change, with a large increase in the firms sending partners directly to overseas markets, or appointing agents to manage their affairs abroad. This was indicative of the firms seeking to internalise some functions whilst outsourcing others.

3.8 The challenge of volatile markets and thin finance

By 1868 the total population of trading firms in Calcutta had grown significantly, increasing from 25 to 169 firms. This increase was, however, in a large part due to the increase in small firms and individual agents, with the proportion of sole-proprietors or single agents rising from 25 per cent of the total firm population in 1832 to nearly 50 per cent in 1868. The large increase in partnership firms occurred after the financial panic of the early 1830s, with the number increasing by over 260 per cent by 1868.

Amongst the firms that emerged after 1833 several distinct trends emerged. There were efforts to increase the scale of capital and managerial capacity at various points over the period. The proportion of firms with over four partners was 22 per cent in 1824, 25 per cent in 1845 and 15 per cent in 1863. However, these larger firms appeared to be more unstable and fallible during periods of economic distress. In the years after the financial panics of 1833 and 1847 the number of large firms declined significantly. In 1858 firms with four or more partners accounted for only 7 per cent of the population.

The firms' organisational structures also developed. In 1830 a small minority of firms placed partners in international markets; this had increased to nearly 70 per cent of firms in the 1860s. Similarly the number of firms contracting with agents to represent their interests abroad also increased, with over 50 per cent having such arrangements by the late 1850s.

These changes indicate that the agency houses had evolved towards various different forms of trading partnership in the years after 1830. The increase in number and diversity of structure, particularly after 1850, raises various questions: why did some firms increase the size and scale of operations; was there an efficient size of operations; why did firms change their international structure? The limits to the local credit markets, and vicissitudes and volatility of the indigo trade encouraged firms to explore different mechanisms to organise the market. Whilst changes in scale and structure of the markets created new opportunities and constraints that affected the transactions for resources such as capital and information, possibly incentivising change in the firms' structure and financing.

Understanding how and why the firms adapted to the changing conditions of the indigo market and more general changes in the Calcutta economy are the focus of the next two chapters. The case studies of Palmer and Co. and Gisborne and Co. provide sources to analyse how the efforts to increase the scale of finance, carry out banking operations to manage the flows of credit, and integrate activities in the indigo market were undertaken and the extent to which they were successful.

Chapter 4 Opening the Indian market: John Palmer and Co.

4.1 Introduction

Palmer and Co. was amongst a number of well-established agency houses operating in Calcutta when the EIC retreated from trade in 1813. The historiography of the agency houses revealed that contemporaries and historians regarded them as important agents in the development of the Anglo-Indian trade yet few direct records survive from these firms.[216] The letter books of John Palmer provide a unique personal account of a leading Anglo-Indian merchant, and describe the banking and trading activities undertaken by the firm. A parliamentary select committee report also details the organisation and operations of the agency houses. The firm's bank account with Barings sheds light on its various transactions and financing.

These sources show how the firm adapted to the thin financial markets and high transaction costs for credit by internalising banking operations in Calcutta. The firm used its partnership with Cockerell, Trail and Co. (Cockerell and Co.) in London and a network of trading partners across Asia to facilitate flows of trade credit and coordinate loans to colonial governments. The firm also provided extensive credit to indigo factory owners, taking over a number of factories when loans were not repaid. This structure saw John Palmer become the 'Prince of merchants' before catastrophe overtook the firm in 1830.[217]

The chapter builds on the recent work of Webster to reconsider the firm's network of relationships with external parties and how these were managed. This extends Webster's thesis that the internal organisation and management was a significant explanatory factor in the failure of the firm. The conclusion proposes that, whilst the problems caused by the thin credit markets in Calcutta were a significant challenge, it was the difficulties in establishing suitable

[216] See chapter 2.3 for a historiography of the agency houses.
[217] Webster, *The richest merchant*, 23. The sobriquet was given to Palmer by Francis Rawdon, the Governor General of India.

governance to manage the relationship with its corresponding firm, Cockerell and Co. that caused the firm to fail.

4.2 Small houses with many lines of business

The agency houses emerged after a series of reforms to the EIC in the late 18th century. Sweeping changes to the operations in India saw the company's servants banned from conducting trade on their own account.[218] Private trade had been a significant incentive and this privilege had been used to undertake both international and internal trade within India and Asia. These reforms created two distinct opportunities. The first was the need for intermediaries to conduct the internal trade. The second lay in managing the finances of those servants who now could no longer directly invest their earnings in private trade.

The EIC had, therefore, established a system of partnerships with private mercantile interests to exploit trade opportunities in Asia. These 'free merchants' entered India under licence and, although ostensibly tightly regulated, they had a degree of freedom prior to 1813 to undertake trade activities. The free merchants filled the spaces vacated by EIC servants, increasing their presence in trade and acting as bankers and investors. The number of free merchants increased as servants quit the EIC to pursue personal trade interests, and embryonic firms began to emerge. These firms were well placed to take advantage of the new trade opportunities after 1813.

John Palmer emerged from amongst this milieu of EIC officials and private business interests. He had strong family links to India, his father William had been the personal secretary of Governor-general Warren Hastings. After an early career spent in the navy he returned to India in 1791 and launched a short-lived retail venture. Although the firm failed it acted as a springboard for a rapid progression through the ranks of the agency houses. He joined the firm Burgh and Barber and became full partner within two years.[219] From there he joined the well-

[218] 13 Geo III C.63 East India Company Act 1772 and 24 Geo III c.25 East India Company Act 1784. The EIC termed their managers servants.
[219] Webster, *The Richest Merchant*, chapter 2, details the early life of John Palmer. He was born in 1767, and after becoming established in Calcutta rose to become the 'prince of merchants,' linked to the great and the good of Bengal society. The failure of the firm in 1830 was traumatic, and although he restarted

established house of Cockerell and Trail in 1801, effectively merging the two houses; the firm was renamed Trail and Palmer. In 1810 Henry Trail returned to Britain and Palmer and Co. was established. Cockerell and Co. acted as Palmer and Co.'s corresponding house in London. The firm was one of twenty five houses operating in Calcutta by 1813.[220]

Due to the circumstances in which they emerged, the agency houses combined a wide range of banking and commercial interests. These differed from firm to firm but would often include: Deposit banking, agency work for individual clients, insurance services, trading on commission and on their own account in a wide range of products, and some investment and involvement in the production of commodities such as indigo, sugar, and cotton.

The breadth of the activities was shown in the periodically published 'General Rates of Agency, Commission and Godown Rent,' which listed the lines of business and the rates of commission that the agency houses agreed between themselves. An early example from 1809 detailed 17 different lines of business on which commission was charged.[221] In the list published in the East India Trade Committee of 1827 this had expanded to 23 lines of business, of which six can be regarded as directly related to trade, three were insurance services and the remaining 14 were finance and banking functions.[222]

4.2.1 The core business of banking

The EIC's monopoly had enabled it to develop an almost completely contained system of trade, in which the company controlled not only access to, and sale of, products, but managed the financial infrastructure as well. The company had provided the majority of the credit that enabled the Anglo-Indian trade to function. On its retreat little effort was made to deepen or expand credit or remittance mechanisms in Calcutta. In the face of these weaknesses the agency houses

business as an independent merchant, his ailing health saw him die in 1836 of 'quinzy,' a serious abscess in the throat.

[220] BL Bengal Annual Register, 1813.

[221] Ibid.

[222] BA HC2.204, East India Trade Committee 1827, a hand copy prepared by Baring Brothers and Co.

mirrored the EIC's approach and sought to become self-contained financial entities, generating their own credit and remittance systems to enable their trading ventures.

Credit was generated from the banking and agency services offered to the EIC servants and other wealthy individuals.[223] These ranged from basic services such as remitting money, to providing more complex investment services and managing trusts for the families of the European community in Bengal. Commissions ranged from a 0.5 per cent charge for buying bills of exchange, whereas the recovery of money by law or arbitration was priced at 5 per cent.[224]

Deposits and the management of estates and trusts were particularly important as these provided the capital that the firm would use to fund other activities.[225] Whilst this generated a 2.5 per cent commission, it more importantly acted as a source of long-term capital. The terms of the trust agreements made withdrawal of the capital difficult, locking it in and allowing the firm to invest it elsewhere. The trusts also allowed the likes of Palmer to build relationships with new generations of clients.[226]

To attract depositors, the firm offered a rate of interest more attractive than other local investment vehicles such as government bonds. A further incentive was access to the patronage and the connections of the firms' partners. In the case of John Palmer this was substantial, as he had formed a formidable network of influential contacts throughout India. His proximity to senior members of the EIC and government enabled him to provide connections and exert influence on behalf of his clients. Many of Palmer's letters were taken up with managing this network.[227]

---

[223] Webster, *The Richest Merchant*, appendix 1 to 7, analyses the different banking clients of the firm. It was also claimed that Palmer was the most successful of the agency houses in attracting investment from the local Indian community. The numerous letters in Bodleian Library (BoL) MS ENG Letter C90-126, addressed to Indian correspondents give support to this view.
[224] BA HC2.204, East India Trade Committee 1827.
[225] Most of the deposits were fixed balance accounts with a 3 month notice for withdrawals.
[226] BoL MS Eng Letters C69, 14th November 1808, Calcutta, letters to Deslandes, and 20th November 1808, to Sir John Doyle. These show the wide range of activities undertaken by John Palmer for his trust clients; acting as a financial advisor, overseeing property valuations, and finding and managing investment possibilities.
[227] BoL MS Eng Letter C90, 8th May 1820, Calcutta, a letter to Dickinson. Palmer informed Dickinson that his name had been put forward to the Governor General regarding a vacancy.

The importance attached to the banking business can be seen in the constant stream of related letters penned by Palmer himself. He took a strong interest in what, at times, appear to be mundane activities relating to clients' accounts. Palmer's personal interest in relatively lowly-ranked individuals is striking.[228] Great effort was extended to attract clients, including furnishing loans from his personal account as an inducement to deposit savings with the firm. The use of his personal funds to provide loans to a wide array of contacts was both a business development exercise, building long-term relationships with possible clients, but also something he viewed as his duty.[229] This mix of paternalism and business development was also highlighted in Palmer's policy of investing in life insurance for many of his account holders to ensure that accounts could be paid down in case of accidents or death, but to also provide a pay-out to his clients' dependents.[230]

The size and importance of the banking operations at Palmer and Co. was made clear in the creditor schedules drawn up after the firm's bankruptcy. Webster's analysis of the schedules revealed that 770 creditors made claim to over £1.6 million. The largest creditors were other commercial firms, who were owed £730,000. There were a further 577 individual creditors who had claims totalling £630,000. The majority of these individuals were junior officers in the EIC and navy who had been cultivated by Palmer and his promises of patronage, although the presence of high profile individuals such as the Chief Secretary to the Bengal Council and the Resident of Hyderabad validated Palmer's claims of access to the highest figures in the land. A further £300,000 was linked to trust accounts.

These banking activities enabled the firm to generate extraordinary levels of capital relative to the local market's capacity. The £1 million of liabilities linked to individuals and trusts identified

[228] BoL MS Eng Letter C90, 13th May 1820, Calcutta, a letter to Captain Duffin. The relatively lowly captain was courted by Palmer personally. The letter shows that he had already established a private account with Duffin, before a formal account with Palmer and Co. was established.
[229] Webster, *The Richest Merchant,* 46 and 50, described this as, "*noblesse oblige* to his social inferiors. Indeed, Palmers friendships and relationships with Europeans and Indians were invariably complex, frequently combining motives of genuine affection and compassion, with commercial self-interest."
[230] BoL MS Eng Letter C90, 13th May 1820, Calcutta. Palmer asked Duffin for a signature so he could secure life insurance.

in the bankruptcy schedules may overestimate the size of the banking operations, but when compared to the scale of British private and county banks, it would place Palmer and Co. amongst the largest private banks in this period. Hoares of London was capitalised to the value of £1.3 million in 1820, whilst Gosling and Co., which would soon become Barclays bank, had £700,000 in the same year.[231]

4.2.2 Constructing a trading network

The second major area of business undertaken by the firm was trade. It dealt in various British exports including textiles and manufactured goods, whilst sending a range of Indian products, particularly cotton, indigo, and silks, back to Britain. George Larpent, partner at Cockerell and Co., described the methods of trade employed by the agency houses, "The manufacturer does not ship from orders from India, but on his own account, through agents from whom he has advances … the mercantile houses connected with India do not export manufactures on their own account, nor import in return indigo of its own purchasing in India"[232]

Rather than purchasing goods directly the agency houses, acting with their corresponding houses in Britain, conducted trade on behalf of the manufacturers for a commission percentage.[233] The Indian based agency houses received commission, ranging from 0.5 to 5 per cent, on taking the goods to market.[234] This entire cycle could take up to 18 months, with voyage times, sales and remittance of funds.[235]

The trade activities undertaken by Palmer and Co. were underpinned by a network of traders and manufacturers corresponding with each other to determine opportunities, levels of supply and demand, and prices. John Palmer exchanged a wide range of information on various products.

[231] Peter Temin and Hans-Joachim Voth, *Prometheus Shackled: Goldsmith Banks and England's Financial revolution after 1700* (Oxford University Press, 2013), 126 for Hoares, and 145 for Gosling.
[232] 1833 Report from the Parliamentary Select Committee on Manufactures, 126.
[233] Ibid, 136. "The practice of the Indian trade is to put up almost all the articles imported to public sale. The custom of the trade is not to give credit, and never to part with the goods or the warrants for the goods till the money is paid."
[234] BA HC2.204, East India Trade Committee 1827.
[235] 1833 Report from the Parliamentary Select Committee on Manufactures, 142.

The exchange of news regarding market conditions and geo-political issues that could affect trade were collated and distributed throughout Palmer's network. He made regular predictions on likely returns in colourful terms. This particularly doleful note from 1820 cautions one of his contacts against action, "[I] lament to see you thinking about further pursuits in trade: for besides the incapacity which anxiety occasions for matters exacting calmness and fixed attentions, I don't see a single branch of commerce not pregnant with ruin."[236]

On the other side of the network in London, Cockerell and Co. were also heavily involved in the exchange of information. Larpent outlined the mechanisms they used to organise the flow, "Of course the accounts of the state of the markets in Calcutta and Bombay are laid before the parties intending to ship, and upon the appearance of these markets the shipment takes place … we sent out to India two persons acquainted with British manufactures, and obtained through them the correct information of such patterns and such articles that were supposed to be adapted to the taste of the native population, or calculated to supersede the native manufactures."[237]

The breadth of Palmer's trading network was wide. He corresponded regularly with contacts in China, South Africa, Java, the United States and Britain, as well as throughout India. As with the banking operations, personal relationships were extremely important. The contacts were often other agency houses and commercial firms, such as Dents in Canton, or individuals tied to Palmer through business.[238] Many of the letters to established contacts contained extensive personal details, with Palmer keen to discuss his health and family, and pass on details of life in Calcutta.[239]

[236] BoL MS Eng Letters C91, 17th November 1820, Calcutta.
[237] 1833 Report from the Parliamentary Select Committee on Manufactures, 141-142.
[238] BoL MS Eng Letters C90, 10th July 1820, Calcutta, to Dent and Co. This formed part of an extensive correspondence with Thomas Dent discussing the opium trade.
[239] BoL MS Eng Letter C90, 12th May 1820, Calcutta, to Chevalier Grand in Cape Town. There was a regular correspondence with Grand in Cape Town until the 1820s. Due to Cape Town's location at the cross roads of Anglo-Asian trading routes, ships and news were constantly flowing through the port making it a strategically important source of information. The relationship with Grand was conducted, as with many of Palmer's other long standing relationships, in the spirit of cordial friendship. In this letter Palmer discussed the weather and heat in Calcutta, and, as was often the case, his many and varied illnesses.

4.2.3 Palmer and the indigo trade

The letters reveal that Palmer and Co. had a range of trade interests in India, with regular investments in sugar, cotton, textiles, indigo and opium. Although Webster noted an increasing interest in opium, Palmer and Co., along with the other large houses, was closely involved in the indigo market.[240] A rapid increase in production was accompanied by a similar trend in demand and prices after 1816 and through the early 1820s. This was the golden period of Indian indigo and large profits could be made in the boom years incentivising the trading firms to become heavily involved.[241]

The majority of transactions initially occurred though the purchase of finished indigo at auction in Calcutta for consignment to Cockerell and Co. in London. Subsequently, numerous loans were made to factory owners, with extensive cash advances made to fund both their short-term operations and longer-term investments. The interest rates were often in excess of ten per cent per annum, and were double the interest rates the houses paid to their depositors.

Repayment was primarily secured through the hypothecation of the crop, which on its sale would repay the principal, interest and other fees. The volatility of the harvest and occasional collapse in production saw many owners fail to repay the loans. In these circumstances the factories, often used as collateral, were taken in repayment resulting in the agency houses directly owning indigo factories. Through this process, by 1830, Palmer and Co. was in direct possession of 22 indigo factories and a part-owner in a further 20.[242] The firm also controlled various plantations in Java owned by their local agents Deans, Scott and Co. which reverted to Palmer and Co. when the agents failed in 1821.[243]

---

240 Webster, "An early global business in a colonial context," 108, noted that the firm operated a growing fleet of vessels to conduct the opium trade, with 10 in 1815 rising to 23 in 1821.

241 Roy, *India in the world economy,* 129, noted that great profits were made by several traders in the early 19th century encouraged Europeans to leap into the market.

242 Webster, *The Richest Merchant*, appendix 8.

243 G.Roger Knight, "John Palmer and plantation development in western java during the earlier nineteenth century," *Bijdragen tot de Taal-, Land- en Volkenkunde,Deel* 131, 2/3de Afl. (1975), details the take-over by Palmer and Co. of various plantations at Tijkandi Ilir in Java.

The extent of Palmer and Co.'s exposure to the indigo sector can be seen in two exhibits within the bankruptcy schedule. Exhibit A listed indigo factories in which Palmer and Co. held interests and Exhibit B listed those indigo factories they operated directly. The exhibits note the share held by Palmer and Co., an estimated total financial outlay and actual financial outlay for 1830. The estimated outlay to all the indigo concerns showed the firm was responsible for Rs. 2,030,500 (£200,000) of annual advances. The single largest outlay to a directly owned firm was Rs. 100,000 (£10,000), whilst Rs. 112,050 (£12,000) was due to a venture in which they had a 5/6th stake.[244] Palmer and Co. held 13 per cent of the total indigo crop produced in 1823. In 1829 the firm was responsible for 16 per cent of total Bengal indigo output.[245]

The volatility in production and demand in Europe, noted in the previous chapter, put a premium on information. As the following letter to his main contact in London, Henry Trail, indicates, the threat to the indigo crop from the weather was tightly monitored. "However there is no degree of speaking with any certainty, but if it proves a wet month, the crop must fail. Indigo is always too dependent on the weather for confident anticipation – and our note is already so changed since the rains set in… if we have fair weather the crop will be good."[246] Coordinating these flows of information was critical to the firm's profitability.

4.3 The management and financing of an agency house

To undertake these activities, the firm used an ownership and organisational structure broadly shared by the large agency houses. Organised as a partnership, Palmer and Co. had between five to seven partners during the 1820s, making it larger than average.[247] The partners were all European, and, in the larger firms such as Palmer and Co., there were usually several senior partners and a number of junior partners and assistants. Many of the firms drew on family

[244] Webster, *Richest Merchant,* appendix 8.
[245] Chowdhury, *Growth of Commercial Agriculture in Bengal* for 1829, and Webster, "An early global business in a colonial context," 115, for 1823.
[246] BoL MS Eng Letters C90, 9th July 1820, Calcutta.
[247] BL Bengal Annual Register and Directory, 1824, listed the partners as John Palmer, J.S.Brownrigg, H.W Hobhouse, W. Prinsep, F.T.Hall, E.A.Newton, C.B.Palmer. In 1824 the mean was three partners per firm, see figure 9, p.91, making Palmer and Co. substantially bigger than average.

networks to find prospective new partners. Although Palmer recruited his son-in-law Charles, he tended to look beyond direct family for new applicants.[248]

There are no surviving partnership deeds for Palmer and Co., or indeed for any of the other agency houses from the 1813 period. Partnership records for similar firms such as Gillanders and Co., founded in 1825, do provide some insight into the contracts that governed these firms.[249] Clauses defined the split of profits and liabilities between the partners, and detailed the amount each partner could withdraw each year. Clauses defining how partners entered and exited the firm were also common, stipulating the amount of capital to be invested and often a timeframe over which a partner could withdraw. Rules of conduct and guidelines were set out to control the scope of action for the partners.

Alongside the European partners an Indian commercial agent known as a banian was employed. At Palmer and Co., Roggoram Gosain was the chief banian, with Gunganarain Doss and Comulcaunth Doss also long serving employees. The banians provided links to the local Indian communities, helping to facilitate trade and access to the local money markets. They held important internal roles as they controlled the cash accounts, and were responsible for overseeing the firm’s financial records. Although not partners in the firm, the banians did have opportunities to trade on their own account, and often established lengthy relationships with the firms they represented.[250] Beneath the partners and the banian was a clerical staff predominantly made up of Indians.

Whilst John Palmer took an active interest in all lines of the business, Webster found a degree of specialisation amongst the other partners who focused on specific areas.[251] The firm was divided into departments, with banking and commercial activities separated. Palmer discussed

---

[248] Although being a direct family member was not necessary for finding a job, close ties and recommendations were critical. BoL MS Eng Letters C110, 28th June 1829, Calcutta, a letter to Dent in Canton. Palmer provided recommendations for two juniors in his office. These were regular missives from Palmer, who would use his wide network to find opportunities for his many dependents and friends.
[249] Glynne Gladstone (GG) 2695, Original Partnership agreement for Ogilvy, Gillanders and Co. 1826.
[250] Webster, *The Richest Merchant*, 56.
[251] Webster, *The Richest merchant*, 57, noted a clear delineation between the financial, commercial and cash transaction departments.

the recruitment of partners with specialist skills for different departments, "Brownrigg will be master of the whole range of our business, the commercial branch excepted … and when Newton joins the House we shall be powerful in that department, as to fear no eclipse from any establishment in Asia."[252]

4.3.1 A network of firms

Palmer and Co., like the majority of agency houses was linked to a corresponding house in Britain.[253] As figure 12 shows they were legally two separate companies but closely linked through the personal ties of the senior partners. The correspondence pointed to a particularly strong relationship between John Palmer and Henry Trail. Various partners in Palmer and Co. returned to Britain and joined Cockerell and Co.

[252] BoL MS Eng Letter C90, 7th May 1820, Calcutta.

[253] Chapter 3.6, figure 11, p.96, shows the close correlation between the number of trading firms in Calcutta and East India agents in London.

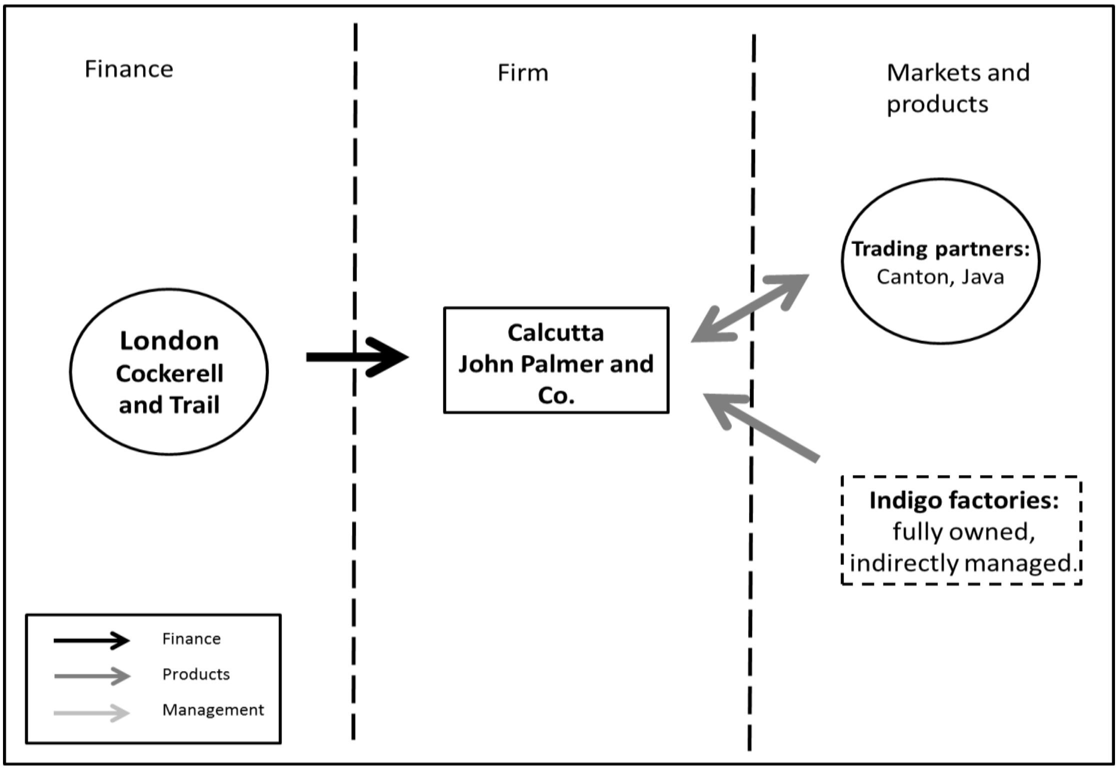

Figure 12. The organisation of Palmer and Co.
Sources: BoL Correspondence in MS Eng Letters C70–C91, Webster, *The Richest Merchant,* BL Bengal Annual Register.
Notes: Abstract representation of the ownership and organisation of the firm, showing the links between the firm, its predominant mode of financing and main markets and products. The rectangles represent components directly owned or managed by the firm, the circles indicate independent entities. Dashed lines indicate partial integration through ownership or management. The diagram shows the links and direction of flow of key resources, finance, products and managerial capabilities.

The two firms interacted closely on both the banking and commercial operations. The Indian exports were consigned to Cockerell and Co. who facilitated the sale in London. Cockerell and Co. also accepted bills and advances made by Palmer for clients remitting funds to Britain. To manage these transactions each firm kept accounts, known as 'exchange accounts', which were periodically reconciled.[254] The balance was almost always in favour of Cockerell and Co., who purchased the exports, made advances to the banking clients and was often the source of credit and capital when Palmer and Co. wanted to make investments. The monies raised from the sale of products in the UK were used by Cockerell and Co. to rebalance the accounts. With bills of

[254] Webster, *The Richest Merchant,* 52. "These 'Exchange Accounts', so-called because the transactions recorded therein also involved complex calculations to take in to account a shifting balance in the relative values of the Rupee and the Pound sterling."

exchange being expensive and in short supply it was preferable to arrange for shipments of produce to remit funds to Britain to pay down the balance.

4.3.2 Multiple sources of finance

Capital was invested by each partner on joining the firm, or built up from their profit share. This would have provided a significant capital base due to Palmer and Co.'s large number of partners.[255] However, the scale of the operations and the length of time for recouping investments would have seen the capital rapidly exhausted if used for trade. Some of the capital was used for longer term investments, particularly in indigo plantations, yet this was problematic as when partners exited the firm they withdrew their capital, so the firm could not afford to have too much of the capital locked-up in long-term investments.

Instead, the deposits and trusts of Palmer and Co.'s various clients provided a degree of the firm's working capital. Some of this was used to extend credit and loans to the indigo planters.[256] This, however, fulfilled only part of their financing requirements. The relationship with Cockerell and Co. was also critical, not only extending trade credit, but also credit to enable the expansion of the commercial and banking activities. The lack of internal accounts makes it difficult to precisely gauge the level of activity between the two firms, but the final liabilities to Cockerell and Co. were estimated at £600,000.[257] However, between 1816 and 1820 a separation occurred between the firms, owing to disputes over the size of the debt and lending policies. In this period Palmer and Co. built a relationship with Barings, opening an account in 1816. The ledgers of these accounts survive and shed some light on both the scale and methods of financing used by Palmer and Co.

---

[255] The initial investment from partners into the large trading firms in this period ranged up to £20,000, whilst reinvestment from profits would also have added significantly to the capital in a successful firm like Palmer and Co. With six to seven partners and retained profits one could estimate the firm would have had capital in excess of £100,000 by the mid-1820s.
[256] 1833 Report from the Parliamentary Select Committee on Manufactures, 131. Larpent noted that the interest rate to planters was often over 10 per cent. It is likely the rate exceeded those at the Bank of Bengal, which as shown in figure 7, p.84, fluctuated substantially.
[257] Webster, *The Richest Merchant*, appendix 1.

The first ledger details the account between 1816 and 1819.[258] The ledger has a main account for Palmer and Co. and a further 45 separate accounts linked to the firm over the three years. Aside from the main account the majority of other accounts were for named individuals or ships and detailed individual trades and transactions, the majority of which were for indigo. The accounts with ship names were mostly direct trades undertaken by the firm, whereas the named accounts were clients who were advanced credit. There were a number of sizable accounts, such as Turnbull who was advanced £33,195. The largest single account was for a ship named Chandernagore, with a debit of £44,707. There were many smaller accounts, for amounts in the region of £600 to £700 which were cleared through the sale of seven or eight chests of indigo.[259]

Palmer and Co.'s own account for 1817 had a debit of £185,634 and credit of £117,696. The shortfall of £67,938 was rolled over into the following year's debit. The increasing scale of activity is shown in the ledger from 1819 to 1823. In 1820 a debit of £186,276 saw an outstanding balance of £40,333 transferred. The following year the total debit expanded to £269,915 of which £251,495 was paid down.[260] Using these figures the total scale of annual financing required by the firm can be estimated; with over £200,000 required per year in credit by the early 1820s, and the subsequent advances to indigo factories of around £200,000 in 1830, an excess of £400,000 per year was needed to fund the firm's various activities.[261]

The large individual transactions such as the Chandernagore shipment, alongside the increasing general account balance, required credit from a lender with large capacity. The time scales for production and marketing was over a year or more in length. If a shipment failed to make a profit, the outstanding balance needed to be carried over. The financial needs of the firm had evolved, from simple short-term trade credit, to a mix of financing with different term structures needed to cover the increasingly diverse operations.

[258] BA Barings America and Colonial ledger 1st October 1816 to 30th June 1819.
[259] Ibid.
[260] BA Barings America and Colonial ledger 1819-1823.
[261] It appears that the funding of the trade activities detailed in the Barings account, including those for indigo, was distinct from the funding of the indigo factories in Bengal. There were no names that appeared in both the accounts and list of factory owners, Webster, *The Richest Merchant,* appendix 8.

The growing size of the roll-overs and Palmer's generous lending policies worried the partners at Barings. There is no indication of the contracts or governance arrangements used to control the accounts, but the inability of Palmer to monitor his clients and ensure or enforce repayments was an obvious source of concern. The account was gradually wound down after 1824 and closed by 1826.[262]

4.4 New opportunities in colonial markets

Due to the size of the debt between Palmer and Co. and Cockerell and Co. the relationship, although reduced, had continued. As the Barings account was wound down, as early as 1820, John Palmer turned again to Cockerell and Co. to renegotiate financing arrangements.[263] Despite the strong personal ties between the partners, Palmer had ignored numerous warnings and demands regarding various business practices. Palmer referenced these concerns, "we are not unmindful of your dependencies here – old or new – and I think you are receiving unequivocal evidence of our improved attention to our mutual relations."[264] Palmer recognised the firm's dependency on the relationship, and set out to show his reformed nature.

The main concerns of both firms lay in the disparity in the balance of the accounts in favour of Cockerell and Co.[265] Without Palmer and Co. accepting goods or bills the flow of credit was predominantly one way. This left Cockerell and Co. exposed, whilst Palmer and Co. had to ensure remittances to pay the balance down. The high cost of using bills as a remittance tool forced the shipment of goods instead which left the firm contemplating shipments in spite of adverse market conditions.[266] On one occasion Palmer wrote, "The present deficit of affairs in England, and perhaps in Europe, augmented consignments would harass you and threaten to ruin

---

[262] BA Barings America and Colonial ledger 1824. Webster, *The Richest Merchant,* attributed the breakdown of the relationship due to Palmer's lax lending and repayment policies.
[263] BoL MS Eng Letter C90, 15th May 1820, Calcutta. In a letter to Trail in May of that year, Palmer said, "I have already attempted an apology for having so long delayed replying to your propositions of August 1818 and I only now add that I much regret it. I think that a useful and agreeable harmony is firmly established between the houses."
[264] BoL MS Eng Letter C90, 9th July 1820, Calcutta.
[265] BoL MS Eng Letter C90, 15th May 1820, Calcutta.
[266] Ibid. "Bills of exchange could scarcely be procured in such magnitude, or on such terms as to render that alternative source of any moment."

our connections here." Yet he still decided that, "I feel the indispensable need of not only keeping up our exchange transactions by that medium [indigo]."[267]

In an effort to develop more robust repayment policies Palmer proposed that at the end of each year they would pay bills on the balance, and an interest rate would be applied to any debt uncovered that year. Palmer also claimed that he would "establish a systematic prudence in all our transactions."[268] Efforts were made to increase communication regarding the exchange accounts and individual client accounts to improve reconciliation and enable greater transparency.

With the connection re-established Palmer and Co. sought to grow both their trade and banking activities. Efforts were made to grow the network of trade partners and find profitable products and routes. This was supported by investments into shipping, with the firm becoming direct or part-owners of over 20 ships used to transport their own goods, and those of other firms on commission.[269] There was further integration into the indigo market and expansion of the banking services was also attempted, as the firm looked to place large loans for colonial governments in East Asia.

These three interests intersected in Java where the firm had a well-established presence through its relationship with local agency house Deans, Scott and Co. (Deans and Co), who acted as a trade partner, but also handled Palmer's plantation interests on the island.[270] On a lengthy visit to Java in 1824 Palmer offered to facilitate a large loan for the Dutch colonial government in Batavia.[271] In a series of letters to the partners in Calcutta, he discussed how agency houses had

[267] Ibid.
[268] Ibid.
[269] Webster, *The Richest Merchant*, 114.
[270] Knight, "John Palmer and plantation development in Western Java." The relationship began as an agency arrangement with Palmer and Co., but both Palmer and Cockerell and Co. lent heavily to the firm. Failed investments in plantations saw the firm taken over by their major creditors in 1821.
[271] Nicholas Tarling, The Palmer loans, *Bijdragen tot de Taal-, Land- en Volkenkunde, Deel* 119, 2de Afl. (1963). John Palmer had a strong relationship with the Dutch government in Batavia, acting as their agent in India, placing small loans and conducting a range of agency business. He visited Java in 1821 and opened negotiations for a loan which failed to come to fruition. This laid the groundwork for the visit in 1824.

acted as intermediaries between the British and Dutch governments and investors, for the placement of such loans, with the firms investing in bonds, whilst also promoting them to their clients.[272]

The plan was for the two firms to act as both intermediary and provider of an extensive, long-term refinancing package for the government which was in constrained circumstances.[273] It had been forced to issue notes at 9 per cent interest, and was desperate to consolidate and lower its cost of borrowing.[274] This would include immediate loans to clear the government's debts in Holland, and a subsequent loan would be raised to cover future expenditure and investments. In total Java Rupees 13 million was proposed.[275] Managing the loan, whilst profitable in its own right, would also build the relationship between the firm and government, opening further agency and trade opportunities.

In a letter to the agent of the Dutch government the initial contract for bills of £60,000 to be drawn against Cockerell and Co. in London was set-out. Repayment was undertaken through the consignment of colonial products, predominantly coffee, to the sum of the principal and interest, and to cover all charges the produce would incur in getting to market. The upside for the firm was a charge of 5 per cent per annum interest on the bills. They were also to charge a commission of 5 per cent on the sale of the produce.[276] The total repayment inclusive of all commissions was estimated to be £80,000.[277] Any shortfall in the repayment due to lower than expected prices in London, would be made up by the remittance of bills from the Dutch government.

Regarding the larger loan, Palmer noted, "I learned that I cannot give assurances of raising the further sum required … by loan, or other means; because its magnitude may exceed the latitude of credit – under any security."[278] To Trail, though, he mentioned that, "I should have been in

[272] BoL MS Eng Letters C126, 19th October 1824, Batavia, Letter to Trail.
[273] Ibid.
[274] Tarling, "The Palmer loans," 163.
[275] BoL MS Eng Letters C126, 19th October 1824, Batavia, Letter to Trail.
[276] BoL MS Eng Letters C126, Letter to Goldman, undated and marked confidential, but amongst the series written in Batavia in 1824.
[277] BoL MS Eng Letters C126, 19th October 1824, Batavia, Letter to Trail.
[278] BoL MS Eng Letters C126, Letter to Goldman.

some doubt about being able to raise so large a sum of money in India at this junction, if I did not rely on the temptation of the Burma war, causing considerable remittances to India, and preventing any pressures on our money market."[279] Palmer believed the outbreak of war in Burma in 1824 would provoke the EIC to issue a war bond that would attract investment into the region. So, despite the local dearth of credit and capital he finished his letter to Goldman, saying he would undertake to secure a further Java rupees 2 million.[280]

4.5 Indiscipline, lax lending, and failure

The size of the loan and length of the commitment meant this was a substantial undertaking for both Palmer and Cockerell and Co. Indeed, despite Palmer's previous assurances to Trail about 'systematic prudence,' and his attempts to generate security for the loan, this was a risky venture.[281] It was also outside the remit of the relationship. Palmer wrote contritely to Trail worrying, "upon the great freedom I was about to take with you, I still deem it necessary to account to you for my proceedings, that if I should unhappily have erred in any inconveniences upon your resources or rules."[282] The unilateral decision to agree the loan with the Dutch government was indicative of both his personal approach to lending and the lack of clear governance between the firms to determine policy and strategy.

The lack of clarity and control over the lending policies was also present in the banking business in Calcutta. In particular the advances to indigo factories were a source of contention, not only with Cockerell and Co., but also amongst the other partners within Palmer and Co. The extensive credit advanced annually to the factory owners was coupled with a light touch repayment policy. Palmer, mindful of the volatility in the sector, gave his clients plenty of leeway in repaying their debts, allowing loans to roll over. He believed that such policies would enable his clients to

[279] BoL MS Eng Letters C126, 19th October 1824, Batavia, Letter to Trail.
[280] BoL MS Eng Letters C126, Letter to Goldman. Tarling, "The Palmer loans," notes that his efforts to place the larger loan were unsuccessful leaving the government in Batavia deeply in debt.
[281] BoL MS Eng C105, Hobhouse to Palmer, 13th June 1824, Caclutta. Hobhouse was highly sceptical of the Dutch government's stability and capacity to repay the loan.
[282] BoL MS Eng Letters C126, 16th October 1824, Batavia. Palmer believed, however, the firms should actively seek to become the *de facto* providers in England and India for large colonial government loans and remittances.

avoid bankruptcy and was the best way of ensuring repayment. Yet, this had resulted in the write-off of £1.2 million in bad loans over twenty years, as recalcitrant debtors played on Palmer's good nature.[283] A similar generosity and lack of prudence was found elsewhere in the banking operations. Palmer would often lend money to clients in full knowledge that the likelihood of repayment was slim.[284]

The laxity in chasing repayments was problematic for both firms as it left Palmer and Co. without the funds to cover their balance with Cockerell and Co. Partners at both firms believed that this was due to the poor judgement and personal negligence of John Palmer. Tighter lending policies were demanded, and debtors were to have their assets seized. Indeed, the firm began using an inspector to investigate the indigo factories and expose fraud and incompetence. These efforts to improve control and oversight were not replicated internally, despite suggestions that fraud was endemic inside the office, as the banians and indeed the partners themselves stole money.[285]

4.5.1 The collapse of the house

As Palmer had predicted when negotiating the loan with the Dutch government, the EIC launched a bond to off-set the costs of the impending Burmese war. Rather than attracting capital to flow into the region, as Palmer hoped, it drew off existing capital. The interest rate of 5 per cent and the relative security of government backing encouraged depositors in the agency houses to shift their capital into these bonds. The houses were forced to put up their own interest rates

[283] Webster, "The strategies, management and failure of John Palmer and Co. of Calcutta," 116. Bagchi, *The evolution of the state bank of India*, 111 and 119. Between 1809 and 1821 just over £10 million was lent, and a further £1 million of bills discounted, by the Bank of Bengal. From 1809 to 1815 every bill was realised. Between 1816 and 1821, out of 5,423 bills, eleven failed at a loss of around £6,000. This puts into stark relief the ineffectual nature of Palmer's approach to managing the firm's loans.
[284] BoL MS Eng Letters C109, 14th February 1829, Calcutta. In a letter to a Ms Kelly, Palmer's nature is well revealed. "So there ends my renewal of your application … But I don't like to see you in discredit, as well as distress; and you are besides, the daughter of a man who has behaved most considerately and kindly to us – in a Trust account – and therefore I send you bank notes as at foot for Rs. 350; and which I put to the debit of your personal account in my unlucky book."
[285] Webster, "The strategies, management and failure of John Palmer and Co. of Calcutta," 122, noted that cash kept in the office was often pilfered by the banians, who perpetrated the fraud by keeping two versions of the account books, one falsified and one correct, to disguise the crime. This was reckoned to have cost the firm £200,000. Webster, *The Richest Merchant*, 125-126, Palmer was suspicions about the behaviour of Gunganarain Doss in 1816 but, due to personal loyalty, did not investigate him.

to try and retain depositor's capital.[286] This was problematic for Palmer and Co., where increasing amounts of capital were locked-up in the indigo ventures.

The scramble for credit and capital was compounded by a disastrous indigo harvest in 1826. Production slumped and an oversupply in the British market from the previous year saw prices plummet.[287] The loss of deposits coupled with the decline in trade receipts had serious repercussions for many firms and Palmer and Co. made a desperate attempt to call in debts. Palmer's letter book in 1829 contained a long series of identical letters to clients that simply read, "Sir, I beg to call upon you for payment of arrears of your statement which should not have been allowed to remain unpaid so long."[288] Desperation pervaded the letters as he was no longer able to support the long-established network of personal and business contacts.[289] Cockerell and Co. were called on to help in the process of debt recovery, and Palmer's laissez faire repayment policy was abandoned.[290]

The pressure for credit in the Indian market caused the firms to look to Britain and their corresponding houses for external financing to bridge the liquidity crisis. For Palmer and Co., the long running disputes with Cockerell and Co. saw the London firm instead demand repayment of a large portion of the outstanding balance. Unable to withstand these credit pressures the firm was declared bankrupt in January of 1830. Palmer wrote to his current and former partners informing them of the catastrophe, "our doom is sealed: we could not pay on the second Saturday: and yesterday, Monday, we shut up … I and mine are completely destitute."[291]

---

[286] Bagchi, *The evolution of the state bank of India*, 133.
[287] Figure 2, p.64, shows the poor harvest results in 1826, and subsequent large crop in 1827 which led to the large spike in imports to Britain in 1828. The effect on price was shown in figure 3, p.65, where the average real indigo price slumped from s.d 102 in 1827 to s.d 56 in 1828.
[288] BoL MS Eng Letters C110, 19th November 1829, Calcutta.
[289] BoL MS Eng Letters C110, 17th June 1829, Calcutta. Letter to Baboo Chunderseekher Bhuttacha. "I find an old letter of yours upon my desk, which gives me great pain; for I despair of finding you employment and I cannot afford you pecuniary relief. My long residence here, and my easy temper, has produced me such a multitude of claims, and I am so utterly unable to satisfy them, that not one day of my life passes without anguish."
[290] BoL MS Eng Letters C108, 11th November 1828, Calcutta. "We beg to enclose the following accounts and will feel much obliged by your using every means in your power to recover the balances due … Should lenient measure be ineffectual, you will be pleased to adopt coercive measures."
[291] BoL MS Eng Letters C110, 5th January 1830, Calcutta.

The impact of the collapse of the firm was substantial. Palmer worried about those he had ruined, particularly his close clients and business associates. Within two days of the bankruptcy he wrote to Thomas Dent in Canton, "I shall be miserable at the magnitude of your stake in my unfortunate concerns. I see above 5 lakhs [Rs. 500,000 or £50,000] inclusive of our Canton account, at your credit; and of your Bills for Rs. 202,000 [£20,000] only Rs. 20,500 [£2,000] had fallen due and been discharged before we stopped."[292]

The loss of £50,000, even to a firm the size of Dent's, was a blow, but the loss of savings and capital for individuals and small firms in Bengal was crippling. Widespread panic spread through the mercantile community in both India and Britain. Palmer calculated that the balance of the house stood at "Debits Rs. 28,300,000 [£2.8 million], Rs. Credits 31,700,000 [£3.1 million]." but calculated that creditors should only receive around two thirds of their money back, "If half the balances be realized – I would calculate on three fourths – we shall pay about 10 annas on the rupee." Finally, Palmer realised the scale of bad debts, which would be irrecoverable as the firm was liquidated. However, he followed this noting, "There are lots of old balances, perhaps exceeding a crore [£1 million], long ago wrote off, but now and then remit a little; and there is also some 8 or 10 lakhs [£80,000 to £100,000] of desperate balances due to me, out of which something must come."[293] A final, desperate, hope that some of the misguided and uncollected loans that had characterised his personal lending policy would be repaid.

Much of the firm's capital was locked up in fixed assets such as indigo plantations and did not quickly re-circulate into the market as the value of such assets crashed, further reducing the availability of credit in Calcutta.[294] A bail-out was discussed between the other leading agency houses and members of the mercantile community as fears of a wider collapse gathered pace. The idea was rejected and depositors and investors fled for safer havens. The next five largest

[292] BoL MS Eng Letters C110, 6th January 1830, Calcutta.
[293] Ibid.
[294] The collapse of Palmer and Co. and the difficulty in reducing its liabilities due to the preponderance of bad debts in the banking operations resulted in efforts to rapidly sell-off assets including the indigo factories. The prices of the assets began to fall and, in the ensuing liquidity crisis, these assets were further devalued perpetuating the crisis. The resulting failure of the other large houses exacerbated the cycle.

agency houses, Colvin and Co., Alexander and Co., Fergusson and Co., Cruttenden Mackillop and Co., Mackintosh and Co., failed over the next three years.

4.6 Organising transactions through partnerships

The failure of Palmer and Co., the large agency houses and the subsequent crisis in Calcutta provoked a parliamentary select committee to be formed in 1833 to inquire into the state of British commerce and trade. The general thrust of Larpent's testimony to the committee was that structural weaknesses in the credit system in Calcutta, coupled with the diverse operations of the firms were the root causes of the failure.[295] He argued that the trade system that emerged after 1813 was a function of the thin credit market. The agency houses, in seeking to bolster their access to capital and credit had been forced to become both retail and investment bankers, alongside their trading operations.[296]

Holding deposits at interest meant the firms needed to find investments that generated returns in excess of the rates they paid out. The indigo sector was a prime destination with increasing capital and credit requirements.[297] The firms had to manage different term structures of liabilities, between long-term bank deposit activities, and shorter-term seasonal loans in indigo. This balance was critically undermined as the confluence of a deteriorating indigo market and the credit shortage provoked by the Burmese war bond issue drew liquidity out of the market at a time when it was pressingly needed.

This testimony is at the heart of Chapman's description of the rise of the agency houses and Bagchi and Tripathi's discussion of their failure.[298] Reassessing the narrative through the lens of

---

[295] 1833 Report from the Parliamentary Select Committee on Manufactures.
[296] Ibid, 127. The large houses including Palmer and Co. also became 'bankers of issue.' This increased local liquidity but the issuing firm faced the risk that large numbers of their notes were returned and they would be forced to redeem them from their capital.
[297] Ibid, 134. "The capital employed in indigo works is partly fixed, invested in the factory mills and the land on which they stand, and partly consists of advances … for the cultivation in all its different stages."
[298] Chapman, *Merchant Enterprise,* the need for credit had driven the firms to integrate the banking functions, and giving them unique capacity for expansion in Bengal. Yet, Bagchi, *The evolution of the State Bank of India*, 133, showed that this was ultimately a weakness, with the houses forced to raise rates of interest on deposits, and subsequently find ventures with higher rates of return, often in the volatile indigo sector.

transaction cost analysis provides a complimentary rationale for the integration of the banking operations and activities in the indigo sector.

The efforts to secure short-term revolving credit and long-term capital for investments can be analysed as a set of transactions for which Palmer and Co. utilised a range of contracts and governance mechanisms. These were recurrent transactions, particularly for short-term credit, and could be obtained in the market from multiple sellers. Market exchange, though, increased transaction costs as the firm had to regularly search and contract with sellers. The firm's bounded rationality made it difficult to establish complete knowledge of pricing, which was complicated by the rapid fluctuations in the interest rates, making decision making about when to transact difficult. It also left the firm exposed to threats of hold-up, as the local money lenders could raise the rates. These issues incentivised the firm to find alternative arrangements.

One decision was to fully internalise the transaction through the establishment of deposit banking operations. Taking deposits and trusts on fixed terms at an interest rate of 6 per cent enabled the firm to lower their costs of credit, which were often in excess of 10 per cent in the market, and guarantee supply. Although, conversely it significantly increased the number of transactions the firm had to conduct with their own customers. The asset specificity of these transactions increased as the firm invested in the capabilities, such as acquiring new partners, to manage this business.

Although the internalisation of the banking operations provided much of the working capital in Calcutta, the firm also needed short-term credit in London to fund their trade and banking activities, and capital for longer term investments. This was most readily accessed in London and was secured through the relationship with Cockerell and Co. The relationship was governed by an agreement negotiated between the two parties and can be described as a bi-lateral governance mechanism. It can be estimated that this arrangement furnished 50 per cent of the firm's annual financing requirements.[299] Yet the governance of the relationship was problematic and when the interests of the partners diverged Palmer and Co. was left with an irrevocable hole in their financing.

Larpent's analysis of the problems created by greater integration in the indigo sector can also be reassessed. He claimed that the integration was ineffective and the investment in new production capacity was poorly managed with the result that, "The production exceeded the consumption, and the consequences were a very great fall in value in England, by which heavy losses were sustained."[300] Yet, why was the strategy pursued so rigorously and why did the agency houses fail to make it work? Analysing Palmer and Co.'s transactions in the indigo sector reveal other factors to consider in the decisions of the firm to change the scope of their involvement.

Palmer and Co.'s recurrent purchases of the product at auction conform to the rationale of transactions undertaken through market governance. This transaction could be highly profitable and low risk due to the presence of multiple sellers. Two factors complicated these arrangements. First, the importance of indigo went beyond its profitability as a trade product due to its use as a remittance instrument, an issue repeatedly noted in the sources. Second, the role of the firm as a distributor of credit with increasing liabilities to the factory owners encouraged them to reconsider the governance of these financing transactions.

The volatility of the production process, the violent shifts in supply and demand, and the difficulty in determining prices, increased the bounded rationality of actors in the chain. It also offered scope for hold-up and opportunistic behaviour if actors chose to exploit the information asymmetries created in the chain. The increased debts held by the factory owners were difficult to monitor and opportunities for malfeasant behaviour were high. Again, the threat of hold-up was prevalent, and as with the banking activities, asset specificity increased as investments were

---

[299] BA Barings America and Colonial ledger 1819-1823, revealed an annual revolving credit requirement of around £200,000 per annum. Webster, *The Richest Merchant*, appendix 8 showed the annual advances to indigo were also around £200,000 pa. So a total requirement of over £400,000 pa, of which 50 per cent came from British sources, which in the years after 1820 was Cockerell and Co.
[300] 1833 Report from the Parliamentary Select Committee on Manufactures, 128.

needed to manage and monitor these loans. To reduce the threat of hold-up of a critical resource and monitor their advances more effectively Palmer and Co. was encouraged to adapt the governance of these transactions.

Bi-lateral partnerships with factory owners were established. The nature of the loans and volatile returns, with the lender having to wait over a year to obtain repayment or roll-over if a crop failed, encouraged longer-term partnerships. These relationships were underpinned by agreements that saw the crop hypothecated to the lender, guaranteeing a supply of indigo. Tighter monitoring was achieved through mechanisms such as the inspector appointed by Palmer and Co. to investigate the factories.

Palmer and Co. also integrated directly into production. The sources showed the firm directly owned 22, and partially owned a further 20 factories, along with the investments in the Javanese plantations. It is difficult to judge whether Palmer and Co. built new factories or only absorbed existing facilities. Ray notes that annual, fixed-capital investment in Bengal indigo was variable between 1810 and 1829, with Rs. 74, 381 (£7,000) invested between 1810 and 1814, rising to Rs. 678,897 (£67,000) between 1825 and 1829.[301] It is plausible that a large firm such as Palmer and Co. did make occasional direct investments in fixed assets such as the factories, although, in effect, they were funding these investments as the provider of finance anyway. The investment into the assets of indigo production, both directly and indirectly, increased the asset-specificity of the transaction and encouraged the move from bi-lateral partnerships to full unification.

The suggestion that this integration was in some sense an accidental result of the credit system, with the trading firms reluctantly taking over the factories as their owners defaulted, was only part of the story. The lack of expertise and knowledge amongst the European factory owners meant bankruptcy was always a possible outcome, and Palmer and Co. did absorb factories in this way. Yet, the scale of the indigo holdings is indicative of a more purposeful strategy at work.

[301] Ray, *Bengal industries and the British industrial revolution*, 227.

The oligopolistic nature of the market, with 73 per cent of the total output in the hands of the top six purchasers in Calcutta in 1829, offered both opportunity and threats to these firms. Competition was increasing in Calcutta, and forced the large, established firms to protect and grow their existing business.[302] The integration could be seen as a strategy by Palmer and Co. to increase market share and raise barriers to entry, by controlling access to indigo. The volatile production process, rampant speculation by merchants in Calcutta, and pressure to use the product as a remittance instrument reduced the firm's capacity to set prices in either Calcutta or London.[303] Integration would, instead, offer control over costs, and ability to adjust to the downward trend in prices.

The increasing integration and use of bi-lateral partnerships resulted in a high level of exposure to one, highly-volatile, sector, and locked up increasing amounts of capital. The combination of the increased investments and the reliance on indigo as a remittance tool made it difficult for the firm to reduce its commitments in the sector. As the indigo market softened in the mid-1820s the value of the factory assets declined, further discouraging their sale until it was too late.

4.7 Agency costs and the problems of contracting

The decisions to integrate banking and indigo production had implications for the internal organisation and management of the operations. Palmer and Co.'s trading activities required the coordination of capital, credit and information amongst various international markets. The firm had enabled the flow of these critical resources through its use of the partnership form and the network of trading partners and clients.

The partners provided capital and over time built up extensive knowledge and experience of the markets and products, whilst members of the network circulated information and trade credit. The partnership functioned through the investment of capital by each partner in return for a share of the profits and an annual withdrawal. The combination of capital investment and profit-share

[302] Chapter 3.4.1, p.70-71, discusses the gradual increase in competition in the indigo sector.
[303] Bagchi, *The evolution of the state bank of India,* 124, taken from Horace Wilson, *A review of the external commerce of Bengal from 1813/14 to 1828/29*.

acted as a strong incentive and binding mechanism to reduce the possibility for opportunistic behaviour and keep the partners' efforts focused on the firm.

The firm repeatedly used this network to access information. Due to the distance between the participants, and the slow speed of correspondence, it was important that information was accurate and reliable. This was critical in enabling the firm to manage the risks in trade and banking. The importance of accuracy was highlighted by Palmer who noted to one correspondent that, "All the information we have received respecting trade is from familie," to signal its accuracy.[304] The network functioned through the personalisation of the relationships, with individuals bound by mutual interest and personal obligations. This enabled the reduction of transaction costs such as search and contracting, as the transactions could be regularised through the network, reducing the need to look for alternatives or enforce contracts.

4.7.1 The growing costs of monitoring and opportunism

These structural features had enabled the firm to coordinate flows of information and finance amongst the network. However, the expansion into more diverse and dispersed activities, including the indigo factories throughout Bengal, the fleet operating throughout Asia, and the banking operations in Java and elsewhere, increased the scale of the network. This expansion was witnessed through the increase in the number of John Palmer's correspondents in the letter books. These increased from 61 in 1809, to 220 in 1820 and 225 in 1829 indicative of the increasing amount of activity undertaken by the firm.[305]

The network had been widened to acquire new knowledge, and expertise, and access more credit and capital, required to undertake these new activities. Webster found that where the firm lacked expertise they tended to rely on agents and the owners of the firms they partnered with.[306] This

---

[304] BoL MS Eng Letters C70, 12th February 1809, Calcutta.
[305] BoL MS Eng Letters C69, November 1808 to January 1809, BoL MS Eng Letters c 91 October 1820 to December 1820, BoL MS Eng Letters C110 May 1829 to August 1829.
[306] Webster, "The strategies, management and failure of John Palmer and Co. of Calcutta." Amongst the partners few, if any, had direct experience of factory management, relying on agents who were difficult to monitor and control. In the *Richest Merchant*, he also referred to similar problems created through the

increased the need for mechanisms to monitor and control agents and borrowers in order to reduce the increased threats of opportunism and to ensure the repayment of debts. Building trust with agents through socialisation was no longer a sufficient mechanism.

Yet, the rising numbers of failed loan repayments from the factory owners and the accusations of fraud from within the firm itself show the difficulties the partners faced in monitoring and reducing opportunistic behaviour. The personal control held by Palmer over the banking operations strained the organisational capacity of the firm; as he struggled with illness he found it difficult to manage the multiplying correspondence and the scale of the business.[307]

One option to resolve these problems was the recruitment of more partners to manage the new operations. The strong alignment mechanisms of capital investment and profit share potentially reduced the problems caused by salaried agents. Yet, identifying and bringing in new partners was complicated. The personal qualities of each potential recruit were assessed, and the balance between improving the firm's performance was weighed against the dilution of the profit share. In his correspondence Palmer exchanged a great amount of information on the relative merits of such individuals.[308]

Character, reputation, and prudence were critical attributes that Palmer looked for.[309] Larpent also emphasised the importance of trust in these relationships, "there is not a person upon my list that I have not knowledge of, in some degree personal … I would give no man advances whose general principles of conducting his business I was not acquainted with."[310] Reputation and trust, for Palmer and Larpent, was a function of social position which restricted the pool of

---

acquisition of the shipping fleet, with the co-owned vessels particularly difficult to monitor and open to opportunistic behaviour.

[307] BoL MS Eng Letters C108, 31st October 1828, Calcutta. Palmer mentioned, "I am getting through a heavy accumulation of correspondence being more than a year owing to sickness and long absence."

[308] BoL MS ENG Letter C90, 7th May 1820, Calcutta. Discussing one candidate, he surmised, "He is a good man and well qualified, but to rickity in constitution to be depended upon for steady labour."

[309] BoL MS Eng Letters C126, 28th September 1824, Batavia.

[310] 1833 Report from the Parliamentary Select Committee on Manufactures, 138.

possible recruits.[311] Many firms used family networks to fill these requirements, but Palmer chose to bring in only his son-in-law, Charles, into the firm. He did not favour reliance on family members, further restricting the scope of expanding the partnership, increasing reliance on agents.

4.7.2 The threats of untimely dissolution

Retaining the existing partners was as important as finding new partners. This required the alignment of interests between the partners to be constantly calibrated and reinvigorated. Failure to build alignment could result in partners exiting the firm, withdrawing their capital and leading to the untimely dissolution of the firm. The firm faced these problems when two partners, Brownrigg and Hobhouse, sought to quit the firm in the early 1820s, to take up positions with Cockerell and Co. in London.[312]

The transition from Calcutta to London was an expected part of a partner's career but still a cause of tension. In this case, the two partners had become disillusioned with Palmer's unilateral decision making and disagreements arose around the lending policies and the arrangements by which his son-in-law was appointed in the firm.[313] Palmer rejected efforts to resolve these tensions by restructuring the partnership agreement and instead sought to negotiate their exit.[314] The fact that the two firms were legally separate entities meant that capital had to be extracted from Palmer and Co. to be reinvested in Cockerell and Co. The extraction of capital was complicated by the need to maintain fixed investments in the indigo factories.

Avoiding untimely dissolution was an outcome that the partners worked hard to avoid. The negotiations, although heated and embittered, sought to find a settlement that ensured the future viability and the relationship between the two firms. In 1824 the exit of the two partners and

---

[311] Webster, *The Richest merchant*, 57. "Finding adequately qualified and experienced people to fill partnership positions from a small European population whose expertise lay mainly in military or bureaucratic affairs rather than commerce was also difficult."
[312] BoL MS Eng Letters C126, September 1824, Batavia.
[313] Ibid.
[314] BoL MS Eng Letters C126, 17th October 1824, Batavia.

their capital was successfully managed, avoiding untimely dissolution. However, replacing their expertise and knowledge was far harder. Writing after the collapse of the firm to Hobhouse, Palmer bemoaned that, “It might have been, I think, averted by Brownrigg’s and your return when invited back.”[315] In the final reckoning Palmer blamed the loss of human capital as the factor that undermined the ability of the firm to manage itself out of the crisis.

4.7.3 Difficulties with decision making and minority repression

The disagreements on banking policies stretched beyond the concerns surrounding the laxity of lending and repayment. Palmer regularly took out life insurance against many of his depositors to recoup outstanding debts in case of death. This was a cost to the firm and the other partners came to view it as an accounting trick used by Palmer to reduce the level of bad debts on the balance sheet and to justify his personal lending decisions.[316]

Whilst adding expense to the firm’s banking activity the real thrust of the dissent rested on the fact that the policy had created excessive debt which the other partners had to bear in terms of reduced profits, despite having little input in the policy and lending decisions. The other partners wanted the partnership agreement to be recalibrated to lower their exposure to these bad debts, particularly for those incurred before they joined. Palmer, however, claimed that, “these were the inevitable sacrifices imposed upon the partnership.”[317] The success of the firm had been built by older partners who had invested and taken risks, so that both the risks and rewards of the firm should be shared amongst new partners.[318]

It was also clear that the decision-making process was ill defined. As the senior partner, Palmer acted rather despotically, taking major decisions such as the Java loan unilaterally, whilst there seemed to be no formal dispute mechanism with which to challenge these decisions. This

[315] BoL MS Eng Letters C110, 5th January 1830, Calcutta.
[316] BoL MS Eng Letters C126, 28th September 1824, Batavia.
[317] Ibid.
[318] Ibid.

revealed a problem with minority oppression, as the junior partners were marginalised in decision-making and were forced to accept policies that negatively affected their returns.

Webster suggests that the breakdown of personal relationships between the partners resulted in an increasing lack of cohesion within the firm, exacerbated by Palmer's declining abilities and leadership. The threat of minority oppression encouraged the partners to seek individual benefits in increasingly malfeasant or opportunistic ways.[319] The problem was intensified as the number of partners expanded. The need for greater capital and capacity to operate the expanding operations, and replace those such as Hobhouse and Brownrigg who returned to London, called for an influx of new members, who joined as the firm's performance waned. Aligning the interests of the seven partners within the firm during the late 1820s was too much for the ailing Palmer.[320]

The costs of agency and the difficulties inherent in the management of agents and partners were perhaps most present in the relationship with Cockerell and Co. The growing need for credit and capital and the limits of the local markets placed ever greater importance on this partnership. However, both parties were worried about threats of opportunism, minority repression and untimely dissolution. The renegotiation of the agreement had sought to find a solution to avoid these outcomes.

Cockerell and Co. felt threatened by opportunistic, or, perhaps more charitably, the incompetent behaviour of Palmer. Yet despite the efforts to restructure the lending and reporting policies, and promises that things were different, they were confronted with the *fait accompli* of the Dutch

---

[319] Webster, "The strategies, management and failure of John Palmer and Co. of Calcutta," 125. As the partners were also able to conduct private trade they had plenty of incentive to work for their personal benefit, and specialisation amongst the diverse activities encouraged deceit and fraud due to the difficulties in monitoring.

[320] Jacob Marschak and Roy Radner, *Economic theory of teams* (Yale University Press, 1972), 124. As the number of members of team increases, so do the resources available to the team and potential pay-offs, but it becomes increasingly complicated to align the interests of the different members. This makes the coordination of information and decision making difficult as each member acts to pursue their individual interests. This problem becomes acute if the team members perceive inequality in pay-offs relative to effort and resources put in. BL Bengal Annual Register, 1824, showed that with seven partners Palmer and Co. was significantly larger than the other agency houses, two of which had five partners, and a further five firms had four partners.

loans in 1824. Conversely Palmer feared that the balance of power in the relationship overly favoured Cockerell and Co. The flight of partners and capital, and the scale of the debt, left him feeling that to, "subscribe to a compact as dangerous as it might seem to the London House, as it is derogatory to ours," would lead Cockerell to, "impose corresponding fetters," on his actions.[321] The threat of minority oppression, with Palmer and Co. and its partners effectively being subjugated by the more powerful London firm, was a major concern.

The real threat, however, and one that Palmer failed to foresee or manage, was untimely dissolution. As Cockerell and Co. saw the profitability of British exports rise as tariffs were lowered, they sought to diversify their activities in India and to look for new partners.[322] The divergence of interests and the failure of Palmer to comply with the policies and guidelines established by the new agreement encouraged the calling in of a large portion of the outstanding debt, bankrupting Palmer and Co. It appears that there was no clause or provision within the agreement to prevent this outcome. Despite the efforts of Henry Trail to provide flexibility and contingencies for changing circumstances, Palmer's intransigence in changing his habits finally saw the rug pulled from under him.

The relationship brings into question the boundaries of the firm. The firms were legally two separate entities, but, although capable of operating individually, Palmer and Co. was closely bound to Cockerell and Co. through the credit arrangements. Palmer and Co. certainly had great autonomy, much to the chagrin of the partners at Cockerell and Co., but was ultimately beholden to the interests of the British firm.

321 BoL MS Eng C126, 28th Sept 1824, Batavia.

322 Webster, *The Richest merchant*, 53. "The London firm, like many of its contemporaries, moved away from dependence upon its close knit relationship with the Indian corresponding firm. Increasingly it began to seek new commercial opportunities in the thriving world of the city of London."

4.8 The agency house crisis explained as a failure of contracting

The chapter shows that Palmer and Co. undertook two critical transactions; those for credit and capital, and those for indigo. In both cases the importance of the transactions to the firm saw it move away from using the market and adopt increasingly powerful contracting regimes to ensure the completion of the transactions. With capital and credit scarce, there was an impetus to internalise these transactions through the establishment of banking operations, and a bi-lateral partnership with Cockerell and Co. To improve access and protect investments in the indigo sector the firm formed bi-lateral partnerships and integrated fully with indigo factories.

This structure enabled Palmer and Co. to significantly expand its activities. Financial capacity was greatly extended and by the mid-1820s the firm annually funded over £200,000 of indigo advances and a further £200,000 of trading credit. This was provided through banking deposits in Calcutta, and around fifty per cent provided by the partnerships in London with Barings and Cockerell and Co. By 1829 the firm directly and partially owned over 40 indigo factories.

The internalisation of the banking and integration of indigo transactions required the firm to develop internal capabilities to manage these expanding operations. The firm used the partnership structure to bring in partners to manage its various lines of business, with seven partners present by 1830. The firm also built a network of agents and firms in key markets to enable the flow of trade credit and critical business information. These included relationships with fully independent firms such as Thomas Dent in Canton, partially owned ventures like Deans and Co. in Java, and individuals such as Chevalier Grand in Cape Town. Many of the relationships were underpinned by long standing personal friendships between John Palmer and the owners.

Yet, the expansion led to overexposure in the indigo market and difficulties in managing the banking liabilities which left the firm vulnerable and reliant on external financing as the indigo market deteriorated. When Cockerell and Co. recalled a large portion of their loans in 1829 Palmer and Co. was unable to generate sufficient funds to repay or find alternative sources of credit to replace the 50 per cent of annual funding provided by Cockerell and Co, leading to bankruptcy.

Explaining the failure revealed the firm faced a critical trade-off. The internalisation of the banking and indigo transactions had created two significant agency problems. First, agency theory revealed the difficulties in aligning the interests and monitoring activities to reduce opportunistic behaviour within the expanded firm. Partners and agents pursued their individual interests, seen in the exit of partners to London, and the fraud committed by the banians in the 1820s. The result was a lack of cohesion between partners resulting in a lack of clarity in control and decision making.

Second, the use of bi-lateral partnerships to manage critical transactions left the firm dependent on the partners' ability to successfully manage these relationships. Ultimately they were unable to create a viable set of contracts and governance to ensure the relationship with Cockerell and Co was not undermined by the threat of minority oppression, and finally undone by untimely dissolution. This failure brought down the firm.

Transaction cost analysis confirms the importance attached by Larpent, and later historians such as Tripathi, to the role played by the thin local credit markets and volatility in the indigo sector in the decisions of the partners to internalise the transactions. Whilst revealing, Larpent's testimony and focus on the credit market should be treated with caution. As a partner of Cockerell and Co., he was closely linked to Palmer and Co. and needed to distance his firm from the fallout of the crisis. This encouraged Larpent to promote a perspective that the credit market was at fault, but could be fixed to the advantage of his, and other, firms.[323] This interpretation missed the critical role played by the bi-lateral partnership with Cockerell and Co. in the failure

[323] Chaudhuri, *The Economic Development of India Under the East India Company 1814-58*, 29. In 1836 Larpent was closely involved in proposals for the creation of a joint-stock bank in Britain to facilitate the flow of capital to India to be used to improve manufacturing and infrastructure investments and thus the flows of export goods to Britain.

of Palmer and Co. Perhaps, this was deliberate obfuscation by Larpent, to obscure the role played by his firm in precipitating the crisis.

Instead, analysis of the internal management of the firm, particularly considered through the lens of agency theory confirms the findings of Webster, that the difficulties the firm faced in establishing robust systems of organisation left it ill-equipped to manage increasingly large and diverse operations.[324] The analysis of the failure of the firm, linking its choice of governance to undertake critical transaction with the agency implications for managing the relationship, provides an explanation that fully accounts for both the external and internal costs.

To strengthen these inferences it would be interesting to further examine the extent to which clauses defining these relationships and in the partnership agreements were legally enforceable, possibly though examination of court cases. An interesting counterfactual argument could be advanced that improved contracts or contract law to enforce such agreements could have saved Palmer and Co.

The failure of Palmer and Co. can be understood as a combination of firm-specific issues. Indeed the individual failings of John Palmer, and the importance of, and failure to manage, idiosyncratic relationships, were unique factors to the firm, limiting the scope of the findings. Yet, Palmer and Co. should be seen as representative of a group of larger firms identified in chapter 3, which extended their scale and scope in response to integrating the banking functions and expanding into production of indigo. Of the eight firms with four or more partners in 1824, all had failed by 1834. The previous chapter showed that in the 1820s the majority of the larger agency houses had a corresponding firm in Britain; indicative that the agency and governance issues identified in Palmer and Co. were a common feature to this group.[325]

The vexed issue of financing, the problems related to the integration in the indigo sector, and internal governance and coordination, were critical elements the descendants of the agency

[324] Webster, *The Richest Merchant.*
[325] Chapter 3.7.2. discusses the close correlation between the Calcutta and London firms, indicating that this was a common arrangement.

houses had to solve. Analysis of Palmer and Co. showed that transacting by bi-lateral partnerships required good contracts, governance and the capacity to enforce them. Did the failure to use bi-lateral partnerships encourage the new trading partnerships to utilise different forms of governance and organisation?

Chapter 5 From traders to plantation owners: Gisborne and Co.

5.1 Introduction

The collapse of the principal agency houses in the early 1830s and the resulting financial panic prompted Larpent to suggest that, "These lamentable events will ultimately bring forward houses who will take up business upon different principles, and who will be enabled to give sufficient support to the manufacturing and commercial interests of India, without embarking in those extended operations."[326] These new firms had to overcome the problems that had bedevilled the agency houses; costly local financing, difficulties in managing operations in the volatile indigo sector, and the problems of internal governance and coordination.

This chapter uses the case study of the firm Gisborne and Co. to examine how the new firms were organised to mitigate these problems. Focusing on the years from 1830 to 1855, the case draws on the correspondence between the firm and Barings, and the various accounts held with the bank. They reveal that the firm retained the partnership form, but had a distinctly different organisational structure to Palmer and Co. with partners of the firm located in Britain and India. The main transactions for credit were structured through a contracted relationship with Barings in London, and the indigo operations were managed using privately-held multiple-shareholder companies.

This analysis reassesses the claims of Chapman, that these firms were weaker than their predecessors.[327] The structure of the relationship with Barings provided stable long-term financing that enabled Gisborne and Co. to survive for over 50 years, whilst remaining profitable. The improved capacity to access external sources of finance was an important development that became an increasing feature of Anglo-Indian trade. Similarly the use of multiple-shareholder firms, improved access to capital and diversified risk in the indigo sector, which encouraged further experimentation with the form.

[326] 1833 Report from the Parliamentary Select Committee on Manufactures, 130.
[327] See chapter 2.4 for a historiography of the trading firms after 1830.

5.2 Filling the void left by the agency houses

In his testimony to the Select Committee Larpent proposed that the firms in Calcutta and the structure of the Anglo-Indian trade would change, driven by the increasing importance of British exports. Firms would specialise in this trade, acting directly as agents for British manufacturers.[328] However, financing these operations would remain problematic as it, "requires the command of large capital, not only from the distance, but from the large average you must take in the Indian trade before a profit can be ascertained."[329] Larpent's proposed firms were to be smaller, better capitalised and more specialised, to enable them to cope with the volatility in the trade.

Matthew Gisborne was well versed in the vagaries of this volatile business environment having worked in India since 1816. Along with two brothers, John and George Dougal, he founded Gisborne and Co. in 1830.[330] The firm was a partnership, with himself based in Britain and the Dougal brothers running affairs in Calcutta. A further partner, Henry Menzies, joined the firm to set up a venture in Bombay, initially called Gisborne, Menzies and Co.

The first letters regarding Gisborne and Co. in the Barings archive discuss the founding of the firm and the experience of the partners.[331] The letters note that Gisborne was one of the leading agents importing British textile goods to India and this was the major line of business undertaken by the firm. Gisborne's experience and network of contacts in Lancashire ensured the firm was well-placed to take advantage of the growing opportunities with regards to British exports in India after 1830.

[328] Ibid.
[329] Ibid, 138.
[330] Chapman, *Merchant Enterprise*, 84-85. Matthew Gisborne began his career in India in 1816, as an agent for Lancashire merchants Cropper Bensons, managing the sale of textiles. He was listed as an individual agent in the 1824 Calcutta directory, but in 1826 he hired the two Dougal brothers. In 1829 he returned to Britain having built up a substantial reserve of capital. With this he established the firm to continue the business of receiving textile consignments from Cropper Bensons, and other British textile firms.
[331] BA HC631, December 23rd 1830. The correspondence is made up of the letters received by Barings and Co. from Gisborne and Co.'s partners in both Calcutta and Britain.

Gisborne's connections provided some trade credit, and he also arranged the consignment of goods through the London-based East India house, Gregson and Co. The correspondence to Barings outlined his intent to significantly increase the level of trade and to expand the firm in Bombay, for which he required additional financing.[332] This led him to approach Barings to seek an increase in credit that would allow the expansion and make greater advances to British manufacturers.

Barings always sought extensive reports from trusted agents and contacts before agreeing to arrangements with merchants and trading firms.[333] The negotiations for credit were successful and the firm was actively using the facility by 1832.[334] There appears to be no documentation of this initial agreement, although in light of later negotiations and other contracts between Barings and merchants from the period it would seem likely that the agreement would have been legally contracted.[335]

5.2.1 Undertaking the British export trade

The organisation of the trade activities between Gisborne and Co. and Barings are well-detailed. In 1836 Menzies opened discussions to arrange shipments of cotton from Bombay to Britain, consigning them to Barings. The correspondence first established market conditions, "it is generally thought here that the unusually brisk demand in Manchester for the present time of the year and the consequent wants of the spinners who are very low of stock, will support or probably advance the prices of cotton a little during the next two or three months."[336] Collation

[332] BA HC631, 31st December 1830.
[333] Ziegler, *The Sixth Great Power*, 129. BA HC6.3.1 Letters 2, 3, and 4 December 1830. Three of the initial letters regarding the firm are by individuals writing character references, which discussed the financial viability, mercantile experience and moral character of Gisborne and the other partners.
[334] BA HC631, 19th October 1832, noted that Menzies has been dispatched to Bombay and made the firm's first transaction of some size.
[335] BA LEG 25, a contract signed between Barings and Co. and cotton merchants in the United States in 1836 indicates that formalised legal contracts were used by the bank in their dealings with trading firms.
[336] BA HC631, 1st January 1836.

of information on supply, demand and prices were critical for Gisborne's partners, but also to Barings, who would provide the finance but also often conduct trade on their own account.[337]

Broadly, there were three options available to merchants to finance the purchase of goods from manufacturers. A trader could purchase goods outright, taking ownership of the goods on the spot, which was known as the 'purchase system'. More usually, an advance of a certain percentage of the total cost would be made, and the remainder paid when the goods were sold. Second, a manufacturer could consign the goods to a merchant, in which case the merchant never took ownership of the goods but would control the shipping and sale, taking expenses and a percentage from the final revenues and remitting the balance to the manufacturer. Finally, hypothecation was used when a creditor advanced money to the manufacturer and the finished goods were put up as collateral against this loan. On sale of the goods, the amount outstanding against the loan would be repaid, any further profit being returned to the manufacturer.

Of these three models, consignment had tended to be the dominant mode of transaction in the 18th and early 19th century.[338] Merchants had limited capacity to buy outright whilst producers had little knowledge of overseas markets to risk sending their products, so consignment balanced the risks between the parties. However, Menzies noted a significant shift towards the 'purchase system,' with trading firms increasingly buying directly from the manufacturer.[339] This was driven by the downturn in textile prices due to intense competition amongst manufacturers in Lancashire and Yorkshire. With lower costs, the risks to the trading firm were reduced and direct purchase had various advantages; the merchant could control the amount and choice of goods, and ship at optimal times for the market based on their knowledge of demand and prices. Conversely, consignments were often made up of unsuitable goods, with little thought given to

---

337 BA HC631, 13th January 1836.
338 Stanley Chapman, *British Marketing Enterprise: The Changing Roles of Merchants, Manufacturers, and Financiers, 1700-1860, The Business History Review*, 53, 2 (1979). Joost Jonker, & Keetie Sluyterman, *At home in the world markets: Dutch international trading companies from the 16th century until the present day*, Sdu Uitgevers (2000), posit that the upswing of international trade in the 18th century was driven by consignment trade, allowing merchants to open new markets without having to have extensive capital to purchase goods, and manufacturers could access new markets without the expense of overseas establishments.
339 BA HC631, 13th January 1836.

conditions of supply and demand.[340] Whilst increasing their costs, this offered the merchants greater control over the goods and the profits.

As with Palmer and Co. an extensive flow of correspondence was used to manage this trade, swapping information about production, prices, exchange rates and market outlooks of the main trade products such as sugar, silk, opium. There was also regular discussion on the state of the money markets, listing the costs of bills of exchange, the exchange rate and forecasts for the availability of credit.[341] The level of detail is striking; a letter from Menzies discussing the type and quantities of goods to be shipped from Britain to Bombay ended, "Each bale should contain 300 or 400 but not more and only one number in a bale. The yarn should be of Manchester best second quality of mule/no water twist/of a rather yellowish colour, in bundles of five not ten each tied with scarlet ties. The bundles in two paper, the outside one of which should be dark purple or black with a gold label on the exterior."[342]

The switch to the purchase system increased the need for credit, and encouraged the firm to improve its connections amongst the Lancashire textile manufacturers. Gisborne discussed the establishment of an office in Liverpool as he wanted to build the business directly rather than relying on agents.[343] The expansion into such an important area of business was to be conducted by trusted individuals. Due to Henry Menzies' experience in India and knowledge of textiles he was the prime candidate.

Once it was decided that Menzies should move to Liverpool, Gisborne asked Barings for help in identifying a partner who could replace him in India. They had previously identified a possible candidate, "a gentleman who has been there for a few years, who we had reason to know would

[340] GG 2595 Correspondence from Ogilvy, Gillanders and Co. located in a Cash account book for 1826–31, also highlighted these issues. A letter to Staffordshire potters discussed the inability to sell their wares on consignment as they were not suitable for the market, whereas they wrote regularly to a John Craig in Glasgow, contracting directly for the dispatch of various textiles for the firm in Calcutta and Bombay.
[341] BA HC631, 16th July 1835. This expressed the continuing concerns with the Calcutta money markets, with worries that liquidity, credit and exchange rates would be affected by the EICs decision to pay-off various loans.
[342] BA HC2 222, July 1832.
[343] BA HC631, October 1832.

be glad to join us, and of whom we heard a high character," however an "unfortunate habit of occasional intemperance in the gentleman in question became apparent," and the negotiations were broken off.[344]

The solution to this issue resulted in a significant change in the relationship between the firm and the bank. Joshua Bates, the head partner of Barings, writing in his personal journal noted, "During the past week we have been reflecting on the possibility of strengthening the House of Gisborne and Co. of Calcutta, accommodating a partner and furnishing him with capital sufficient to enable them to assume an importance in Calcutta worthy of our patronage. In the present depressed condition of the India trade by means of the many failures we cannot fail to become receivers of a large proportion of the goods from that country."

The subsequent entry confirmed the arrangement, "The question has been settled by Mr Richards deciding to go to Calcutta and Mr Gisborne has determined to consent: this has my entire approbation as calculated to put the house on the most favourable footing there and also here."[345] John Richards was an agent for Barings who had worked in South East Asia, providing reports on trade from India and Mauritius in the 1820s and 1830s.[346] To enter as a partner in Gisborne and Co. he was advanced £20,000 by Barings to invest as capital into the firm. This was a significant investment almost doubling the capital of the firm.[347]

5.3 Organisation of a new trading partnership

The arrival of John Richards as a partner deepened the link between Gisborne and Co. and Barings and reconstituted the partnership. The partnership agreement has not survived but there are several documents which give an indication of its structure. There was certainly a clause to agree the share of profits or losses. The percentage of the profit each partner took is shown in table 11. The size of the share was determined by capital invested, seniority, and amount of work

[344] Ibid.
[345] BA Joshua Bates Journal September 8th 1833 and September 15th 1833.
[346] BA HC6321A, contains a series of letters from Richards to Bates in the early 1830s from Calcutta, Bombay, and Mauritius providing market reports and discussions of the firms active in these markets.
[347] BA HC631 Capital Statement for 1835.

undertaken. A senior partner, with extensive capital invested, would have a larger share than a junior partner, hence John Richards large share on joining the firm. However, older partners who undertook less work but retained their capital in the firm had their share lowered in favour of junior partners working in overseas markets. This can be seen in the gradual reduction of Matthew Gisborne's share.

Table 11. The profit share of partners at Gisborne and Co., 1835 to 1841

	1835 (%)	1837 (%)	1838 (%)	1841 (%)
Gisborne, M	29	23	25	22
Dougal, J	27	29	28	20
Dougal, G	13	15	14	22
Richards, J	31	33	33	13
Richards, C				23

Sources: BA HC631 Capital statements 1834/35, 1836/37, 1837/38, 1840/41.
Notes: The profit share was calculated by adding the capital of the partner at the beginning of the period with any capital paid in, and subtracting any deductions to provide a cash flow for each partner in each year. This is subtracted from the capital at the end of the period to reveal the amount added to the individual partner's account. Each partners' annual change is divided by the total profit to find the percentage received.

Likewise, an agreement on expenses or deductions was also common. This determined the amount a partner could withdraw in a year, in effect a wage. These amounts were negotiated each year, and were dependent on partners' requirements and performance, although limits were often imposed. Figure 13 shows the majority of deductions were between Rs. 20,000 (£2,000) and Rs. 40,000 (£4,000) a year, although Matthew Gisborne took very little out of the firm through this mechanism.

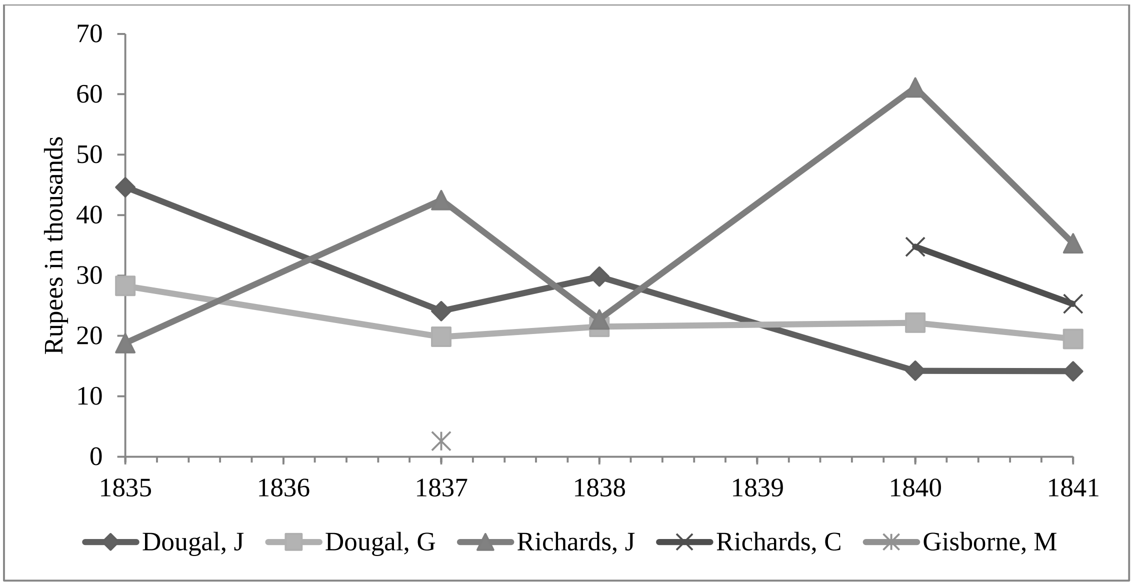

Figure 13. Gisborne and Co. partner's deductions, 1835 to 1841.
Sources: BA HC631 Capital statements, 1834/35, 1836/37, 1837/38, 1840/41.
Notes: The values are real and have been deflated using the CPI index in Feinstein 'Pessimism perpetuated.' Although expressed in rupees the value of the deductions was determined by spending in Britain, hence the use of a Sterling CPI deflator.

Each of the partners also invested capital into the firm and although the initial investment does not survive the balance sheet of 1834/35 shows the capital of the three founding partners: Matthew Gisborne Rs. 160,000 (£16,000), John Dougal Rs. 30,000 (£3,000) and George Dougal Rs. 10,000 (£1,000). John Richards contributed Rs. 200,000 (£20,000) provided by Barings. Each partners' profit share was then added to their capital which was retained in the firm. In this way each partner was able to accumulate capital. Figure 14 shows that Matthew Gisborne had increased his share by £50,000 in seven years, and even the junior partner George Dougal saw his portion increase by £14,000 in the same period.

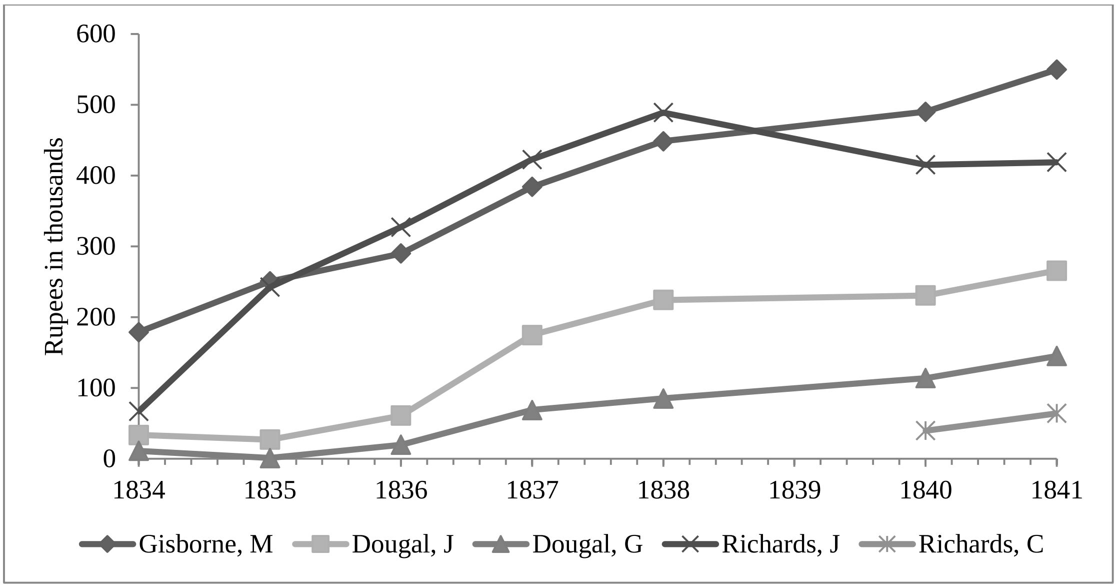

Figure 14. Gisborne and Co. Capital accumulated per partner, 1834 to 1841.
Sources: BA HC631 Capital statements, 1834/35, 1836/37, 1837/38, 1839/40, 1840/41.
Notes: The values are real and have been deflated using the CPI index in Feinstein 'Pessimism perpetuated.'

The capital investment ensured that each partner had a significant stake in the firm and an incentive to improve profitability and thus their own capital stake. It is likely that the agreement would contain clauses that detailed the removal of capital in the event of partners leaving, dying or the winding up of the partnership. In the case of Gillanders and Co. the agreements provided a timeframe of 12 months. This would give the remaining partners time to find a replacement or make a decision on the future of the company with a degree of planning.[348]

Other clauses may have sought to limit behaviour that could negatively impact the firm.[349] Similar clauses put limits on the capacity of a partner to make financial decisions such as purchases or the acceptance of bills of exchange outside defined limits or without the written consent of other partners. The agreements were usually signed for a period of five years, but

[348] GG 2695, Original Partnership agreement for Ogilvy, Gillanders and Co, 1826. LMA MS 37003 Harrison and Crosfield Partnership Agreement, is a similar agreement for a contemporary Liverpool based tea broking firm that also contained a common range of clauses relating to the exit of partners and the dissolution of the partnership, suggesting this was a common feature for such firms.
[349] LMA MS 37003 Harrison and Crosfield Partnership Agreement. Article 10, partners can only trade for the benefit and profit of the firms and should, "Devote his best energies time and talent in the business." Article 11, "That the said partners shall be fast and true to each other in all their dealing."

were often renegotiated when a partner joined or left, giving regular opportunity to negotiate the conditions of the partnership.

5.3.1 A network of partners

There is no discussion on the size of the offices run by each partner in the correspondence with Barings. It is likely that the arrangements in India would be similar to the earlier agency houses. The registers show that in 1838 the firm had four named partners, Gisborne and the Dougal brothers, as well as John Richards. In 1843, the first year in which the Calcutta registers listed assistants, the firm had five partners, including Charles Richards, and four assistants.[350] This configuration of five partners and four assistants was retained throughout the 1850s and 1860s.[351] There would certainly also have been clerical staff and banians. The senior partners focused on making contacts and dealing in the market, juniors on building knowledge and overseeing the office, the banian managing local connections and clerics undertaking accounting and correspondence work.

The organisation differed from the network of clients and acquaintances used by Palmer and Co. Gisborne and Co. ensured they had partners located in key markets to directly manage their business. Gisborne was central to coordinating activities with Barings in London.[352] The partners in Calcutta managed the indigo trade, whilst dealing sporadically with trade in other products. Those in Bombay focused on the import of British textiles and the export of cotton. Menzies provided knowledge and contacts in Liverpool. This improved knowledge of these markets and facilitated the more efficient collection and flow of information.

[350] BL Bengal Annual Registers, 1838 and 1843.
[351] BL Bengal Annual Registers, 1849, 1853, and 1858.
[352] BA HC631, 24th May 1848, the contracts signed between Barings and Co. and Gisborne and Co. stipulated Matthew Gisborne's position as the main interlocutor between the parties. He was designated as the senior partner and only he could sign the firm's bills.

The relationship with Barings also differed from that established between Palmer and Co. and Cockerell and Co., particularly after the entry of John Richards into the firm.[353] By inserting their own agent into Gisborne and Co., Barings moved from solely being a provider of credit to an active member of the firm. Through this Barings obtained a degree of input into decision making and control over Gisborne and Co.'s activities, consulted not just on issues of financing but with regards to important decisions such as recruitment. Barings' expertise and knowledge of London and other markets was shared with the partners in India, and they played an active role in managing the sale of goods imported from India.

Using Barings' account ledgers it is possible to gauge the amount of trading activity undertaken by Gisborne and Co., and their short-term credit requirements. The account may not represent the entire trading activity undertaken by the firm, but it would certainly account for a large proportion. The accounts show that in 1833, the year after the agreement was reached, Gisborne and Co. had a debit of £18,931, and credit on the account was £14,620.[354] By 1836 the debit stood at £142,590 and this grew yet further in 1837 to £248,068.[355] This placed the scale of activity on a par with Palmer and Co. in the early 1820s.[356]

This ten-fold increase in the debit account was driven by a rapid increase in bills accepted by Barings. In 1833 13 bills were accepted, with the largest valued at £3167. In 1837 28 bills were accepted with the largest of £41,834. Assuming that the bills accepted transactions represented individual purchases of goods or a bundle of purchases from the same seller, they show an increase in both the number and size of the trades. Indeed £41,834 would have amounted to

---

353 The status of John Richards as an agent of Barings is not entirely clear. The correspondence showed that Richards himself was unclear about the status of the capital advanced to him by Barings, and whether he was to remain as a partner at Gisborne and Co. were the relationship between the firms to cease.
354 BA Gisborne and Co. Barings Account 1832, Folio 328.
355 BA Gisborne and Co. Barings Account 1836, Folio 323.
356 Value of trade accounts for Palmer and Co. 1821 £269,915 (£266,168) and Gisborne and Co. 1837 £248,068 (£257,332), deflated real values in brackets. Figures deflated using the CPI index in Feinstein 'Pessimism perpetuated.'

around 30 per cent of the firm's total capital in 1838.[357] The increasing scale of the transactions and total balance could be linked to the increasing use of the purchase system.

As the total credit requirements increased it was important that the financing fit with the cycles of trade. Gisborne noted these issues in relation to the indigo sector, "it is desirable for Gisborne to be able to draw freely from the months of July to November, when they are in full advance for one season of indigo cultivation and commencing arrangements for the next … which they would be able and would engage to replace by bills or produce during the months of December, January and February."[358]

Paying down the advance could only occur once the indigo had been sold. Repayment was also dependent on finding favourable rates for remitting funds. The problems encountered by Palmer and Co. regarding the volatility in the costs of remittance continued. Bills of exchange were widely used, but the most secure were issued by the EIC which were limited in number and the discount rate fluctuated dependent on demand.[359] The strategy used by Palmer and Co. of remitting funds via consignments of goods continued to be used extensively, but remained risky with the threat of over-supply and drops in price.

5.3.2 The agreement with Barings

The expanding trade activity of Gisborne and Co. was underpinned by the credit made available by Barings. Letters from Matthew Gisborne detailed the arrangement which included a £50,000 credit for advances on purchases in England, £100,000 for drafts on consignments, and £20,000 for exchange operations.[360] This would have provided a total credit facility of £170,000. The relationship between the two firms had been strengthened by the insertion of John Richards, and

[357] See figure 16, p.154, for Gisborne and Co.'s capital accumulation.
[358] BA HC631, 17th August 1838.
[359] BA HC631, 24th November 1836. "Is it not likely that remittances of company bills to India from this country, and of specie from America, will have been greatly reduced by the present state of things, that exchange will probably be driven up in India in consequence? It is highly important to Gisborne and Co. that they should receive the best information and advice as to the probable duration and effect of this scarcity of money."
[360] BA HC631, 17th August 1838, BA HC631, 22nd November 1837.

flexibility in the arrangements provided contingency against the volatile conditions of trade, yet there were misgivings at Barings about the level of credit extended. By 1836 the facility was exceeded by nearly £80,000 and the partners at Barings decided to reconfigure the various credit lines available.[361]

The main conditions of the new agreement were a £30,000 credit for advances in England, £50,000 available in Calcutta synchronised to the indigo sector, whilst shipments consigned to Barings were not to exceed £150,000 over the year, inclusive of the other credit lines. The debit was to be paid down through consignments and bills.[362] The agreement was renewable on an annual basis and renegotiation was possible.

Despite the new agreement problems with remittances continued throughout the 1840s. Gisborne, writing in 1841, claimed the firm was still restricted by unfavourable terms for obtaining bills, whilst the partners pointed to a range of issues affecting their revenues, including poor indigo seasons.[363] Finding a balance between ensuring timely repayments in a manner that did not reduce the firm's profitability was a continuous source of disagreement between the firms. These problems were, however, eclipsed by the financial crisis that engulfed Calcutta in 1847. The collapse of the Union Bank provoked a liquidity shortage in the Bengal market and sixteen firms failed.

The crisis forced Gisborne and Co. to seek a further readjustment of the agreement. The account with Barings stood at £60,000 debit, and £33,000 was owed to Gregson and Co. The firm had a further £82,000 in outstanding debts, which could have proved crippling in the face of the downturn in the Calcutta markets. Instead Barings consolidated a portion of the debt into loans.[364] As collateral mortgages on Gisborne and Co.'s property in Bengal were demanded.[365]

---

361 BA Gisborne and Co. Barings Account 1836, Folio 323.
362 BA HC631, 8th July 1838.
363 BA HC631, 7th April 1848.
364 BA HC631, 7th February 1848. A loan for £60,000 was priced at 5 per cent commission and a 5 per cent annual interest rate to be repaid in two instalments over two years. A £33,000 loan had a commission of 2 per cent and an interest rate of 5 per cent to be repaid in remittances from the sale of goods.
365 Ibid.

The proposal was for the firm to sell off these assets, which consisted of indigo and sugar plantations and factories, valued at £134,000, with a further £80,000 from the sales of their produce, to pay down these loans over two years.[366]

Due to the legal ramifications of transferring the mortgage deeds, the agreement was formalised and contracted by Barings' solicitors. The formalisation of the debt and provision of collateral convinced Barings to continue to extend credit facilities allowing Gisborne and Co. to ride out the crisis of 1847. Indeed, in the face of significant local difficulties, the firm was actually able to extend its operations.

5.4 From traders to plantation owners

The letters from the early 1830s show Gisborne and Co. regularly traded for indigo at the Calcutta auctions, but the loan contracts revealed that they had also become owners of various indigo and sugar plantations.[367] It is unclear as to whether these factories were absorbed in lieu of debt repayment like those taken by Palmer and Co. or were direct investments. A letter in 1833 to Barings had discussed the possibility of taking over the EICs Silk Filature factories when they were offered for private sale, indicating an interest in direct investments into production operations.[368] This opportunity was passed over as were various proposals related to cotton production.[369] However, Gisborne and Co. and Barings did make a number of direct investments into indigo factories.

The first effort was through an investment undertaken in the late 1840s by Gisborne and Co. in the Tirhoot Indigo Company (Tirhoot Co.).[370] The firm was a privately held company with five indigo factories in the Tirhoot region of Bihar province. The majority of the directors were based

[366] BA HC631, 24th May 1848.
[367] BA HC631, 6th June 1834.
[368] BA HC631, Letter 11 1833.
[369] BA HC631, 13th June 1848, and 3rd April 1848, refer to the proposed cotton venture.
[370] BA HC631, 20th March 1846.

in London. A note indicated that Gisborne and Co. subscribed for twenty percent of the shares and that both Matthew Gisborne and John Dougal were made directors.[371]

The location of the factories in Bihar strongly suggests that they were operating under the zerat system and that the firm had directly invested in both the land for cultivation and the factories for production. The increased level of capital required for purchasing the land and to set-up the factories offers a plausible reason for its organisation as a multiple-shareholder firm. The capital, alongside the annual credit requirements, would have been higher than under the ryoti system in Bengal.[372] The company was founded prior to the legal reforms of the 1850s so would not have benefited from incorporation and limited liability, but having multiple shareholders would have diversified the risk of the investment.

Efforts to coordinate the indigo trade in the 1830s involved extensive commentary in the correspondence, highlighting likely demand and prices in the Calcutta and London markets.[373] The partners sought to identify the likely production output for the season, and predict its impact on prices. Ownership of the Tirhoot factories gave Gisborne and Co. more detailed and accurate information on the growing season and output. This allowed much better specification of the likely supply, demand, and prices.[374]

Barings' interest in the Tirhoot Co. rapidly expanded from interested bystander to active participant. In 1848 the Tirhoot directors approached Barings, using Matthew Gisborne as an intermediary, to seek financing. The Tirhoot Co. had liabilities of £75,000 of which £25,000 was listed as 'permanent credit' at the bank, which appears to be a long-term loan incurred through

[371] BA HC638 is an undated list of shareholders in the Tirhoot Co. which shows the partners at Gisborne and Co. held 20 per cent of the shares. BA HC638, 31st January 1851, is a letter signed by Matthew Gisborne as director and 29th July 1852 a letter signed by George Dougal as director.
[372] See chapter 3.4.1 and 3.4.2 for the discussion on the ryoti and zerat systems and relative costs of production.
[373] BA HC631, 16th July 1835, John Richards to Barings. "We should therefore like to hear from you as early after the receipt of this as possible, as to the effect which a crop of 120,000 maunds would have upon your prices."
[374] BA HC638, 10th October 1848, Letter from Tirhoot Directors to Barings. "If the decrease of cultivation be not considerable, then an advance of 5 per cent might be acceptable in Calcutta in preference to shipment. In either case the continuance of a very low rate of exchange would strengthen the inducement to ship the Indigo."

the investment in fixed assets.[375] This left £45,000 required for the annual variable costs such as the wages of the workers, seeds, and equipment. A portion would be funded by bank and private credit, whilst Barings were asked for £20,000.

In return the entire season's crop was hypothecated to Barings, to be sold either at auction in Calcutta, or shipped to Britain. The revenues were used to pay off the £20,000 loan and a 5 per cent commission, a further £25,000 was earmarked for next season's expenses, and any remaining profit would go to the shareholders. To provide a degree of collateral and assurances to Barings these agreements were personally underwritten by the directors of the Tirhoot Co.[376] This was a significant risk were the entire crop to fail.

The funds were advanced to Gisborne and Co.'s account in Calcutta, allowing the partners to monitor the loans on behalf of Barings.[377] The partners in Calcutta would also make the decision on whether to sell the crop in India or ship it back to the UK. These arrangements proved a success and were renewed with an adjustment to the fee charged by Barings.[378] This arrangement continued until 1865 when the final mention of the Tirhoot Co. in the Barings archive was a transcription of a telegram which simply stated, "Tirhoot half destroyed by caterpillars … advise friends hold."[379] This disaster seems to have been the end of the relationship and the account with Barings was wound down.

The decline of the Tirhoot Co. did not mark the end of Gisborne and Co.'s intervention in the indigo sector. The firm, again in conjunction with Barings, established a new indigo venture; the Ganges Indigo Company (Ganges Co.). It is first mentioned in a letter in 1853 and later in that year the first reports from the factories began to appear in the correspondence.[380] In the ledgers

[375] BA HC638, Liabilities to meet from the Indigo Crop of Season 1847/48.
[376] BA HC638, 19th July 1848.
[377] BA HC638, 10th October 1848.
[378] BA HC638, 14th August 1849. The new agreement was a 3 per cent commission on the total sales and 5 per cent interest per annum on the advances.
[379] BA HC638 20th April 1865. The Tirhoot Indigo Company was listed in the BL Bengal Annual Register and Directory 1868 as being active. It appears to have continued trading, with only Barings, and possibly Gisborne and Co., ceasing to be involved.
[380] BA HC631, 7th April 1853.

a line noted that the Gisborne indigo account had been renamed as the Ganges Indigo Co. A plausible explanation is that the sale of Gisborne and Co.'s factories was proceeding slowly, due to the collapse in prices following the panic in 1847, and both firms sought to maximise the assets in India more effectively by converting them into a fully-fledged indigo company.[381]

The amount of correspondence and the way that the firm is accounted for in the ledgers indicate that Barings was closely involved with the venture, which would support the view that they had converted the debt into a stake in the indigo firm. Reports and accounts from the individual factories appeared on a monthly basis and the ledger at Barings contains individual factory accounts. The ledgers from 1855 to 1875 show that Barings were advancing roughly £30,000 a year to the venture.[382]

The Ganges Indigo Co. emerged at a time of significant change for Gisborne and Co. In April 1852, Matthew Gisborne, the founder and head partner died.[383] In response, John Dougal relocated to Britain and was named as the senior partner and new partners were added in India.[384] However, it is clear from the ledgers and the changing nature of the correspondence that the firm was changing its form and focus in the years after 1855. The ledgers show a remarkably quick downturn in the size of Gisborne's general trade and shipping accounts. In 1850 the general account had a total debit of £35,816 and the shipping account likewise £56,378. This had declined in 1864 was £9,015 and £16,030. In 1874 there was no longer a shipping account and the general account had a mere £4,000 going through it, whilst the indigo accounts were maintained at a consistent level.[385]

It is possible that the firm was obtaining short-term trade finance from another source, but it appears they had become increasingly focused on the management of the indigo operations. Indeed a correspondence between the partners and a British Member of Parliament, Dudley

381 BA HC631, 9th May 1848. "In our own factories we are preceding quietly in dispensing of any property…. We fear that it will be a long time before factories again become easily saleable."
382 BA Ledgers 1855 to 1875, Gisborne and Co. accounts.
383 BA HC631, 29th April 1852.
384 BA HC631, 24th May 1848, BA HC631, 23rd January 1851.
385 BA Ledgers 1850, 1854, 1864 and 1874, Gisborne and Co. accounts.

Mangles, revealed the firm had acted as an agent for his indigo ventures in Bengal since the early 1850s. Alongside owning and managing their own indigo plantations, they had become agents in India for other such ventures.[386]

That the firm wished to further expand their activities in these areas is revealed in one of the last letters in the archives. In 1864 the senior partner in Calcutta wrote to Barings proposing that the bank provide credit of between £30,000 and £60,000 to buy a number of tea gardens operated by the EIC in the Himalayas.[387] The intention was to operate them, "on the model of the late Tirhoot Company."[388] The partners at Gisborne and Co. would take a stake whilst acting as the company's agent in India, offering the remaining shares to Barings and other close associates. This was to, "prevent jobbing in shares and being associated with objectionable shareholders."[389] This, in effect, was to be a private company with tradable shares that would diversify the risk of acquiring and running the gardens, yet without the need of resorting to a public offering. The winding down of the trade accounts show the firm had moved away from the volatile world of trade to try and find more stable returns through the management of plantations.[390]

5.5 A stable and long-lived firm

Gisborne and Co. developed an organisational structure quite distinct to that of Palmer and Co. The integration of the trading network, as show in figure 15, with partners placed in key markets, was a marked difference from the loose network of business associates employed by Palmer and Co. The relationship with Barings, removed the need to integrate banking activities, whilst the more extensive use of legal contracts and the integration through the placement of John Richards, created a very different relationship to the rather laissez-faire arrangement between Palmer and

---

386 BA HC6314 1848-53, London: Correspondence between Hon Dudley Mangles MP, about the cultivation by Gisborne & Co. as agents of indigo estates in the district of Kishnaghur (Krishnanagar), Bengal.
387 BA HC631, 18th July 1864.
388 Ibid.
389 Ibid.
390 Ibid. "We do not hold out the expectation of any extravagant profits from this undertaking, but there is every reasonable prospect with good management of a fair return."

Co. and Cockerell and Co. Finally, the integration into the indigo sector took on various forms, including the private multiple-shareholder company and partnership with Barings.

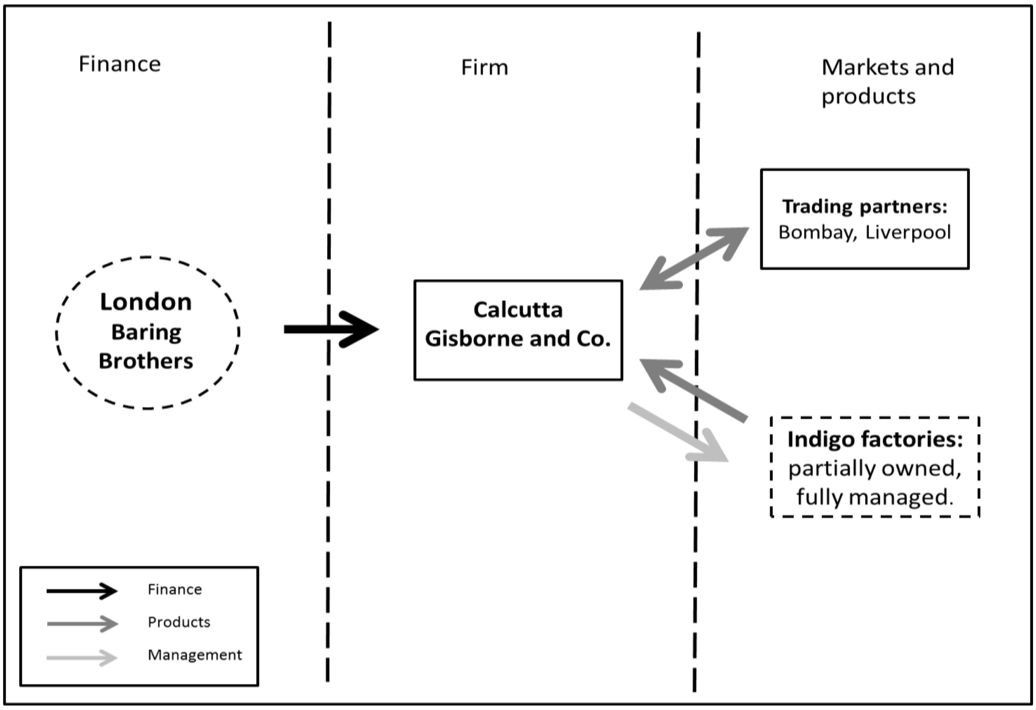

Figure 15. The organisation of Gisborne and Co.
Source: BA HC631 Vol.1 and Vol. 2 various letters.
Notes: See figure 12 notes for details of the legend.

With five partners and a managerial capacity of nine, the firm was one of the larger trading firms in Calcutta in the 1840s and 1850s.[391] Analysis of Gisborne and Co.'s financial performance is limited to the simple balance sheets sent to Barings through the 1830s. Figure 16 shows that the firm's capital was grown by over 200 per cent in less than ten years, with in the region of £170,000 retained by 1841. Comparisons of financial performance are somewhat difficult, but Chapman found that British trading firms with capital of £100,000 in these years were considered large, although not amongst the elite of mercantile ventures.[392]

[391] Table 8, p.92, and table 9, p.94, show that the firm was amongst a minority of between 20 to 30 per cent of the firm population that was larger than average in terms of the number of partners and total managerial size.
[392] Chapman, *The rise of merchant banks*, 40. Chapman, *Merchant enterprise*, 314, Jardine and Matheson the largest of the Asian trading firms had capital of £1.47 million in 1836.

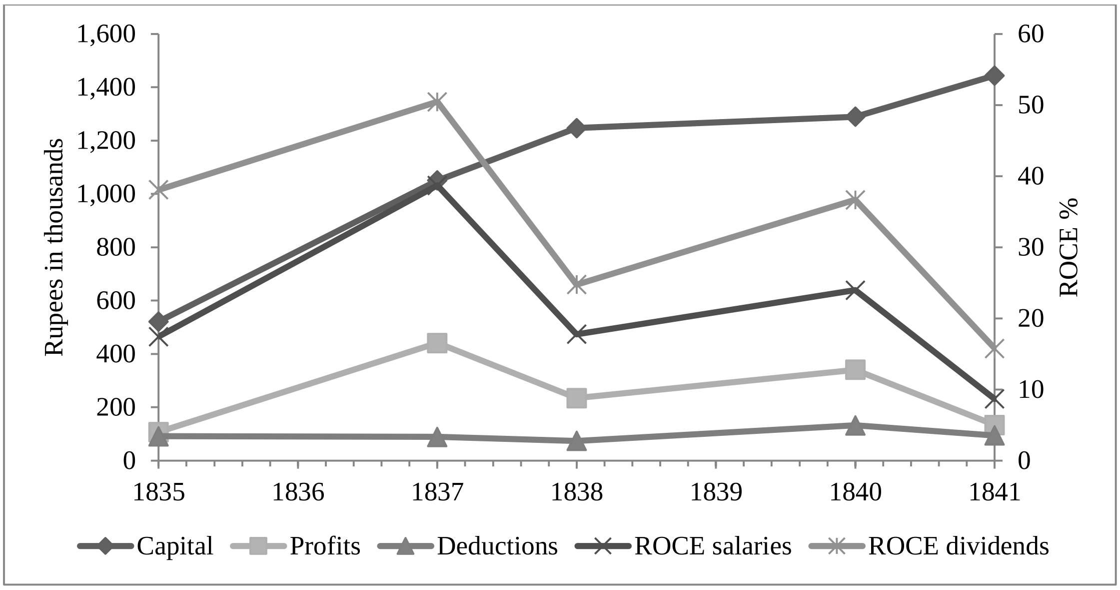

Figure 16. Gisborne and Co. Capital, profits, and deductions, 1835 to 1841.
Source: BA HC631 Capital statements, 1834/35, 1836/37, 1837/38, 1840/41.
Notes: ROCE is calculated here as profits at the end of each period divided by capital at the beginning. Two estimates are calculated: ROCE Salary classifies the deductions as salaries and thus working capital which is added to the capital. ROCE Dividend classifies the deduction as a dividend to the partner and it is added to the profit. This is a simplified calculation that does not account for working capital requirements, which would reduce the return in both series. The values are real and have been deflated using the CPI index in Feinstein 'Pessimism perpetuated.'

The returns to the partners can be analysed using a simple Return on Capital Employed (ROCE) calculation.[393] Two estimates are made of the returns, one in which the deductions of the partners are classified as salaries and added to the capital, the other classifies them as dividends and adds them to the profits. The second seems to best represent the total returns to the partners relative to the capital at risk. Both series reveal volatile returns, but the mean average annual ROCE was 33 per cent with deductions classed as dividends. In comparison to the relatively risk free returns on gilts, which averaged at around 3 per cent, or EIC or other government bonds priced around 5 to 6 per cent in this period, the partners generated a return significantly above the risk free rate.[394]

393 Gisborne and Co. sent a simple capital balance to Barings and Co. for the firm and each partner. More detailed reporting was provided for the indigo factories which recorded detailed costs and revenues from each garden. There were no clear examples of the partners calculating marginal returns, although the distribution of profits based on input to the firm shares a similar intent.
394 Clapham, *The Bank of England Vol.2*.

As well as generating returns, the firm's governance enabled it to avoid dissolution on the exit of various partners and the death of the founder, Matthew Gisborne. Indeed, the firm managed to overcome the thin credit markets in Calcutta and persistent volatility in the indigo market, and, in the face of a major financial crisis in 1847 and the uprising of 1857, expanded its operations to integrate the various indigo concerns. The last entry of Gisborne and Co. in the Bengal directories was in 1890 and the firm was still listed as the agent of Barings.[395]

Accurately calculating the longevity of a cohort of the trading firms between the benchmark years is complicated by the regular changes in the names of the firms. However, as a rough estimate, of the 67 trading firms listed in 1834, there appeared to be 12 with an almost exact match in 1855, and a further 11 with similar elements.[396] This gives a survival rate of between 18 and 30 per cent. Gisborne and Co.'s longevity was a significant achievement in light of the turnover of firms. How, then, was the firm able to overcome the constraints of the market and what factors distinguished Gisborne and Co. from the unstable firms that failed in 1847 and the earlier agency houses?

5.6 Experiments with integration and ownership

The firm's longevity can be analysed through the governance mechanisms it adopted to manage several key transactions. The predominant transactions, as with Palmer and Co., centred on the efforts to obtain credit and indigo, markets which continued to be problematic after 1830. Although the sources are predominantly made up of correspondence between the firm and its bankers and may over-emphasise issues of financing relative to the rest of the firm's activities, these issues were of paramount concern to the partners. The need for short-term credit and long-term capital, whilst overcoming the persistent problems with the costs of remittance, remained a balancing act the firm needed to address. The difficulties of managing the operations of a bank of issue and deposit, and the resulting instability amongst the agency houses, were a spur to find

395 BL Bengal Annual Register, 1890.
396 BL Bengal Annual Registers, 1834 and 1855. The 12 firms had exactly the same name or a very minor change of name, whilst 11 firms had one name in common with a firm in 1855.

new solutions. Analysis of Gisborne and Co.'s financing showed the adoption of a very different set of governance mechanisms to those used by Palmer and Co.

The emergence of the Union Bank and expansion of activities of the Bank of Bengal ameliorated some of the problems of local credit market. The terms for credit, although improving, continued to fluctuate, averaging around 8 per cent for credit on indigo, with an additional 1 per cent to discount bills.[397] The firm may have used market transactions to fulfil some of the local short-term financing. However, as the number and size of the transactions undertaken by Gisborne and Co. increased, it would have been costly to continuously negotiate such transactions, and left open the opportunity for hold-up. These sources would also not solve their needs to make advances to textile manufacturers in Britain.

There were benefits in finding a long-term overarching credit agreement to reduce the number of negotiations and contracts needed to secure financing in both Britain and India. The agreement with Barings provided an annually-agreed credit line at a fixed interest rate lower than those offered by the local providers. As the relationship developed there was scope to roll over the debts and negotiate repayment conditions. Short-term credit can be a misnomer as the credit often needed to be renewed over multiple periods. This adaptability was critical, enabling the firm to avoid a lock-up of liquidity as faced by Palmer and Co.[398]

Access to longer term capital became more important as the firm sought to set up the offices in Bombay and Liverpool, and later in the indigo ventures. Some of the capital could be provided from within the firm, by accepting new partners, using retained profits and other private channels.[399] Funding the indigo factories was more problematic. The zerat system required higher levels of fixed investment in the land and factories and the length of time before returns were generated could also be substantial. Locking-up capital in these investments could leave

---

[397] See figure 7, p.84, for Bank of Bengal interest rates on indigo crops from 1841 to 1853 and the discussion in chapter 3.5.1 on the banks in Calcutta.
[398] Gisborne and Co.'s ledgers with Barings show the annual roll-over of debits at the end of each year. These could be extensive amounts and show the importance of flexibility in the arrangements.
[399] BA HC631, 5th August 1835. Gisborne noted that the firm had successfully launched the house in Bombay from their capital and from retained profits and could do so again.

the firm undercapitalised at moments of stress. Barings provision of the annual credit for the Tirhoot Co., and investment in the development of the Ganges Co., helped to balance both short and long-term financial needs.

The relationship can initially be classified as a bi-lateral partnership and bore some similarities to the relationship between Palmer and Co. and Cockerell and Co. However, differences in the structure of the relationship reduced the possibility of untimely dissolution. The partnership was bound by legal contracts which defined the parameters of the agreement. The annual renegotiation, although a cost, enabled both parties to set expectations, air grievances and find solutions, giving the relationship a degree of adaptability. The 12 month period of notice required to wind-up the agreement also gave both parties opportunity to source other arrangements.

The use of the contracts and other bonding mechanisms such as personal guarantees and the collateral of mortgages lowered the possibility for opportunism. Although partners at Gisborne and Co. were unlimitedly liable for debts incurred by the firm, it was time consuming to extract such debts by winding up a company. Personal guarantees were easier to recover, and showed the commitment of the partners to fulfil the contracts. The efforts by Barings to monitor activities through the regular exchange of accounts and balance sheets, helped by the proximity of Matthew Gisborne to Barings' partners in London, built greater trust between the parties.

The insertion of John Richards altered the nature and nexus of the relationship. By providing Richards with capital, Barings effectively became not only an investor but an active participant in shaping the firm's actions through their proxy. The importance of the relationship to Baring's own trading interests, and the desire to improve monitoring of their increased exposure to Gisborne and Co. encouraged this further integration.[400]

[400] BA HC631, 17th April 1837. The relationship was not just critical for the operation of Gisborne and Co. but was also important for Barings in terms of undertaking trade on their own account in India and other Asian markets.

The arrangement with Barings lowered transaction costs for both parties; for Gisborne and Co. the transactions for finance and information were significantly reduced, whilst Barings could lower the costs of obtaining the trade goods and information they required from India. This provided Gisborne and Co. with short and long-term credit, without the risk of issuing notes, or the need to balance the term structures of deposits. Yet, like Palmer and Co., the partners were forced to make a trade-off between guaranteeing a sustainable source of financing and autonomy.

5.6.1 Achieving stability and profitability in the indigo sector

Gisborne and Co. had initially used the market to govern their purchases of indigo, trading in the auction at Calcutta on their own and Barings account. In light of Palmer and Co.'s high exposure to this volatile market, what gave Gisborne and Co. the impetus to undertake the costly integration into production through the Tirhoot and Ganges Co.'s; why was this method apparently more successful than the 'over-speculative' efforts of Palmer and Co.?

There are a number of plausible explanations for this change in governance. The first was driven by the continued threat of opportunistic hold-up, and risks to the supply of a valuable product. The sources show the continued importance of indigo as a remittance instrument, raising the importance of its supply. The threat of hold-up was exacerbated throughout the 1850s, as the problems in the ryoti system resulted in increasing occurrences of peasants reneging on contracts to grow leaves.[401] The threat to production and loss of earnings encouraged both factory owners and trading firms to find a different solution.

The problems of coordination driven by volatility in production continued after 1830. With little elasticity in the costs of production and a credit system dependent on regular sales, the trading firms found themselves losing money as they were forced to sell into a depressed market. The inelasticity was exacerbated by the ryoti system as there was little flexibility to change either the

[401] See chapter 3.4.2 for the discussion on the breakdown of the ryoti system.

price or quantity of leaves once contracts were agreed, and a decline in prices could not be passed down the chain. Integration offered better coordination of information, improving the bounded rationality of the owners, and thus the capacity to control the costs of production, an important capacity to develop as the general price of indigo declined.[402]

Conversely, an opportunity to improve profitability lay on the demand side, where the improvement of the quality of indigo could result in higher prices. There was a degree of quality differentiation in the product with higher-quality indigo achieving in the region of a 30 per cent mark-up on the low-quality and 13 per cent on middling-quality in the London auctions.[403] Quality could be improved by cultivating and harvesting better leaves, and investing in improved equipment and processes. In 1859 it was estimated that an investment in equipment of Rs. 10,000 to Rs. 15,000 in a 500 maund factory would improve the quality and price by between Rs. 15 to Rs. 20 per maund.[404] Depreciating the cost of the investment over ten years would increase by Rs. 3 the cost per maund, as well as an increase in the cost of harvesting higher quality leaves, but higher returns were still achievable. Without control over the whole production process investment in assets to improve quality would be unreliable as the threat of hold-up in the delivery of leaves would remain.

Production through the zerat system also offered certain advantages related to the structure of the market. With much of the production located in Bihar, this enabled firms to expand production in a region with good growing conditions and little of the political turmoil experienced in Bengal. Expansion could occur through large, consolidated holdings, as the factory owners owned the land and factories in the zerat system, rather than the smaller patchwork of factories and peasant cultivators under the ryoti system. Consolidation improved

[402] See figure 3, p.65, for the average price of indigo.
[403] See figure 5, p.70, for indigo prices differentiated by quality.
[404] GG 2714, Mackinlay to Gladstone 2nd November 1859, the partners at Gillanders and Co. discussed the problems of quality in the indigo sector and the need for their factories to improve the production process and raise quality.

control over the levels of production, reducing the level of inefficiently-produced indigo being brought to market and stabilising prices.[405]

The threat of hold-up from the peasants has been regarded as the main factor behind the shift towards the zerat system, although the difficulties in market coordination, declining prices, and opportunities for consolidation provided strong incentives for the factory owners and trading firms to rethink the organisation of production. The need to protect supply and profit margins through improved control of production incentivised the trading firms to experiment with forms of integration.

The zerat system, did though, require greater investments of capital, on the land and the factories, which further increased the asset specificity of the investments in indigo. Gisborne and Co. was a larger than average firm, yet, the capacity to raise capital by increasing the number of partners was offset by problems with aligning their interests. There was also a strong desire to avoid locking-up too large a proportion of the firm's capital in long-term investments. The Tirhoot and Ganges Co.'s were efforts to find a better distribution of risks than the model of integration used by Palmer and Co.

In the case of the Tirhoot Co. the firm took 20 per cent of the shares, and two seats on the board. The other shareholders appear to have been indigo factory owners who had experience of managing production. Gisborne and Co. provided capital through the purchase of shares, and subsequently mediated the agreement with Barings to provide much of the annual credit requirements. In return, the entire indigo crop was hypothecated to Barings, guaranteeing them a supply of indigo to repay the loan and an annual commission and interest fee. The remaining profits were distributed to the shareholders. Gisborne and Co. coordinated the flow of finance and the product with the British market, effectively acting as the agent for the Tirhoot Co.

[405] BA HC2 188 Indigo Mart, Indigo Report September 1st 1831. "A determination also exists to prevent all increase [in production] … while the low prices in Europe will naturally lead to the shutting up of every factory which has not produced its Indigo under an average cost of Rs. 120 per maund." As figure 4, p.56, showed the level of production became more stable in the years after 1850 as more production switched to the zerat system.

This was a bi-lateral partnership as the autonomy of Gisborne and Co. and Barings was retained from the Tirhoot Co. The benefit over the arrangements of Palmer and Co. was the diversification of risk amongst the various shareholders. Likewise the capacity to coordinate the flows of information and credit was improved due to the links between Barings and Gisborne and Co. This arrangement delivered returns on indigo without exposing the parties to the excess risk of direct sole ownership. The failure of the firm in 1865 may have been a shock but did not cripple Gisborne and Co.

Although this avoided the costs of full unification, bi-lateral governance could be expensive in terms of preparing, renegotiating and monitoring the contracts. The arrangement also left the partners beholden to the interests of other shareholders, preventing them from exerting the level of control over costs, or making investment decisions to improve quality that they would have liked. It appears that it was the lack of control, due to 'objectionable shareholders,' that perturbed the partners about these arrangements.

The issues with the Tirhoot Co. were to some extent eased in the Ganges Co. Although the sources do not reveal the founding of the firm, the way in which it was accounted for by Barings and the extensively detailed correspondence between the two firms strongly suggest it was a joint-venture. The use of similar financing arrangements to those with the Tirhoot Co. would have given Gisborne the credit they needed to operate the firm, whilst hypothecating the crop to Barings. The conversion of existing assets lowered the need for new capital.

This form of unified governance could be predicted through the increased cost of investment in the factory and the increasing asset specificity of the transactions for indigo to Gisborne and Co. Complete integration offered better control and monitoring of the operations, whilst delivering a steady flow of indigo to fulfil Gisborne and Co.'s remittance requirements. The arrangements with Barings enabled continuity of financing and sequential adaption of arrangements without the need for consultation with shareholders, and thus help to make more rapid responses to changing market conditions, a valuable attribute in the face of a volatile market.

5.7 Improved contracts and coordination

The extensive use of the purchase system with British textile manufacturers increased the costs of trade significantly beyond those in the consignment model. The failure to secure accurate and timely information with which to manage the trades was potentially ruinous for the firm. This motivated the reconfiguration of the network, through the placement of partners in key markets. The opening of offices in Bombay and Liverpool, directly owned by the firm, was driven by the need to develop better knowledge of the markets.

The threat from poor communication can be illustrated with analysis of the conditions in the indigo sector. Between 1839 and 1842 British indigo consumption remained between 80,000 and 90,000 maunds per annum. Imports however fluctuated, expanding from 56,000 in 1839 and increasing year on year to 120,000 in 1842. Prices conversely declined sharply, falling from 86 pence per pound to 55 pence in 1842.[406] Failure to predict the precipitous decline in 1842, as imports exceeded demand and prices fell by over 30 per cent, could wipe out profits and leave trading firms exposed to significant losses. Accurate and timely information of the likely level of supply, when contrasted with news of demand and projected prices could prevent bad decisions. The sums ventured on such trades each year are difficult to judge, but their 20 per cent holding in the Tirhoot Co. would have equated to around £9,000 per annum, whilst the Ganges Co. had annual costs of £30,000, indicative that the firm would have several tens of thousands ventured in indigo each year, potentially leading to significant losses.

The importance of coordinating information within the network encouraged efforts to improve the flow and quality of the correspondence. The exchange of letters and reports between the partners in Calcutta and Barings in London tended to occur twice a month in settled periods of business. There was on average an eight month turnaround in the letters; for example, a letter sent on the 13th July 1837 from Barings in London was replied to by the Calcutta partners on

[406] Figure 2, p.64, shows the levels of indigo imports and consumption, and figure 3, p.65, for the indigo prices.

the 22nd November 1837. The return correspondence would arrive with Barings around four months later.[407]

The speed of communication was important with the partners in Calcutta suggesting that even a matter of days could impact outcomes.[408] Various methods were used to speed up the communication such as the dispatch of multiple duplicate letters via different ships and ports.[409] The problem of inaccurate information was also a worry. The partners referred to certain information as coming from friends and acquaintances to signal its trustworthiness. Inaccurate or slow information increased information asymmetries and the chance of opportunism, but also poor coordination and ill-informed decision making.

Efforts to reduce these outcomes saw the firm draw on an improving market for information. Periodicals such as the Asiatic Annual Register, Parbury's Oriental Herald and Colonial Intelligencer, and the Bengal Annual registers, carried a melange of government statistics, reports on products including indigo, and reportage on the conditions of the political and economic environment.[410] Whilst newspapers such as the newly founded Economist in London, and Bengal Hurkaru in Calcutta, contained regular details of market conditions and prices.[411]

Circulars that listed prices, production and market forecasts for a whole range of products proliferated in this period. These communiqués were often produced by specialised firms, such as William Moran and Co., the leading indigo auctioneer in Calcutta.[412] They were increasingly standardised reports, discussing levels of production and coverage of the auction prices. More

---

407 BA HC631, 22nd November 1837. The habit was to start each letter indicating which letter it was in reply to. Kaukiainen, "Shrinking the world," the speed of travel between London and Calcutta declined from 137 days in 1830, to 59 in 1840, and 47 in 1850.This was enabled by the improvements in steam shipping and establishing an overland route at Suez.

408 BA HC631, 17th April 1837. Replying to Barings the partners in Calcutta noted, "From the unfortunate detention of the overland mails of late the wishes expressed in the former came too late to influence us in our purchases on your account."

409 The letters most often bear the postmark of Waghorn via Suez, showing they used the swifter, but more expensive, Suez route.

410 BL Bengal Annual Register, Asiatic Annual Register, Parbury's Oriental Herald and Colonial Intelligencer, 1838.

411 BL Bengal Hurkaru, The Economist was founded in 1843.

412 Examples include BA HC631 Indigo Circular from William Moran and Co. Calcutta 7th August 1852 and BA HC631 Indigo Circular from Thomas, Marten and Co. Calcutta 8th December 1851.

sophisticated statistics including the widespread use of moving averages and concepts of 'excess of supply over consumption' were developed to determine multiple-year trends in production, imports and consumption.[413] Authenticity and accuracy was, though, a problem with these sources.[414] Similarly the periodic timing of their production, often annual or quarterly summaries for the most detailed reports, did not provide the trading firms with the information when it was most urgently required.

The partnership with Barings ensured access to large amounts of business information and statistics on a wide range of products and markets collated by the firm. Barings extensive knowledge of British markets was a critical component in judging the outcomes of a trade.[415] The sharing of this knowledge was vital for both parties, and there were efforts to improve the flow through standardisation of the correspondence from the 1840s. The letters were divided by product and subject and were usually concluded with a discussion on the money markets and an overview of general business conditions to facilitate easy understanding of key market information.[416] This was a marked improvement on the scribbled *ad hoc* notes of John Palmer.

The information on its own was of limited use. The ability of the partners to bring together disparate strands of information on markets and products and turn them into knowledge they could use as foundations for decision making was a critical component of their daily activities and this process was idiosyncratic to the firm. These factors incentivised the need for higher-

---

[413] BA HC2 289 article from The Bombay Times, March 6th 1850. "The following tables are most important and instructive – on the last five years we have had a gross increase on our imports, as compared to the average of the previous five." BA HC2364, A report written in response to the problems in the Indigo trade in 1847, 1st November 1850. The report used the concept of 'excess of supply over consumption' detailing the levels of stock held in the UK as a significant determinant of annual supply and prices.
[414] BA HC2 188 Indigo Mart, Indigo Report September 1st 1831. The authors blamed incorrect reporting of the indigo market on, "anonymous writers, and others whose views are not very clearly understood." To correct this they had ensured, "all the principal Indigo agency houses have furnished us with particulars, and allowed us to publish them under their authority as authentic."
[415] Orbell, *A history of Baring Brothers*, and Ziegler, *The sixth great power,* both discuss the role of Joshua Bates, senior partner from 1828, who implemented the policy of collating information and statistics. This was a very different strategy from other banks such as Rothschild in this period.
[416] BA HC631, 8th February 1850, is an example of the increasingly standardised form of reporting of information. Each letter was numbered, and each product or market was given a headed paragraph in each letter, making it easier to reference and track.

powered governance, hence the internalisation of the transactions through the network of partners in the key markets of Calcutta, Bombay, Liverpool and London. This lowered the risks of hold-up present in the loose network of associates established by Palmer and Co.

5.7.1 Aligning the interests of diverse partners

The changes in the organisation driven by the expansion of the British trading operations had implications for the agency relationships within the firm. The distribution of the partners in the various markets ensured they were separated by time and distance to a much greater degree than those at Palmer and Co. This increased the possibility for opportunistic behaviour, as the partners could exploit information asymmetries to their own benefit.

Various mechanisms were used to align interests and reduce opportunistic behaviour. The annual split of profits and the investment of capital acted as a balancing mechanism, encouraging effort to increase the firm's profit whilst holding capital to reduce the incentive for individual opportunism. As well as the profit share the deductions provided an annual salary of between £2,000 and £4,000. The opportunity for significant returns, both in the short and long-term, was a major incentive to give their best efforts to the firm. The profit split and deductions were regularly rebalanced to account for the work undertaken by each partner and their circumstances. The partners used this flexibility to find a balance between the incentives and the capacity to control and monitor each other's activities.

The partnership agreements contained clauses that sought to guide and constrain the behaviour of the partners, particularly regarding the rights to utilise capital or take on debt, showing an awareness of the problems caused by moral hazard and opportunism, yet these clause were rarely binding in law.[417] Instead the social and cultural attributes required to bond the partners together were predominantly achieved through the recruitment process. As with Palmer and Co. the firm sought trusted, reputable individuals, from a limited pool of candidates. The rejection of a

[417] Harris, *Industrializing English Law,* suggests that many articles in a partnership were of limited enforceability under English law in the first half of the 19th century. Clauses such as 'being true to each other' had little enforceability in law.

qualified individual with capital to invest due to his reputation for intemperance was indicative of the lengths the partners went to find individuals with the right personal characteristics. Gisborne and Co. placed greater emphasis on recruitment from within family networks. The two Dougal brothers were joined by two Richards brothers, and eventually Matthew Gisborne's son joined the firm. The limits this placed on the pool of candidates was off-set by the bonds established by familial networks that improved the trust between the partners.

Many of the mechanisms used to build alignment and reduce opportunism were similar to those used by Palmer and Co., yet the results are distinct. The regular exit of partners from Palmer and Co. can partly be explained by the natural progression to the British based house of Cockerell and Co. The disagreements and breakdown of the relationship between John Palmer and other partners are suggestive that the mechanisms for alignment were not as well attuned or implemented than those at Gisborne and Co. In the period of this case only one partner, John Richards, exited the firm as he returned to Britain for health reasons.[418]

5.7.2 The increasing costs of untimely dissolution

As with Palmer and Co. untimely dissolution was a significant concern. The partnership agreements in this period were designed to minimise the effects of this threat. The clauses required a partner to give a period of notice and a subsequent period, often several years, in which capital could be withdrawn. These processes enabled the partners to enter and exit in a negotiated manner, and remove their capital. This was demonstrated in the case of John Richards who was able to exit the firm without destabilising operations.

The issue, as with Palmer and Co., was not restricted to the exit of internal partners. The relationship with Barings was critical to the success of the firm, with similar issues at stake to those in the previous case: namely the worry of opportunism on the side of Barings, and concerns of minority oppression amongst the partners of Gisborne and Co. These are well illustrated

[418] The registers and correspondence indicate that of the other partners the two Dougal brothers returned to Britain but remained with the firm, as did Charles Richards. The firm retained the knowledge and expertise whilst bringing in new partners to the Indian side of the business.

during the arguments around the size of the debt and the issues with repayment that emerged after 1837 and continued throughout the financial panic of 1848. Unlike Palmer and Co., the firm was able to avoid untimely dissolution.

The mix of formal and informal mechanisms, particularly the use of contracts and collateral, was a marked difference from John Palmer's haphazard and idiosyncratic method of dealing with Cockerell and Co. Perhaps Barings had learnt from their own dealings with Palmer and understood the need for formalised contracts, clarity of decision making, and a degree of flexibility to enable the relationship to flourish. Barings had much to gain from Gisborne and Co.'s success, and their continued support of the firm until its demise in the 1890s illustrate the improved capacity for managing these relationships over the long-term.

The change in the ownership and management of the indigo operations through the use of the multiple-shareholder form also had implications for the various relationships amongst the principals and agents of the new firms. Opportunism, untimely dissolution and minority oppression were all issues that needed to be resolved. The structure of the Tirhoot Co., with shareholders, Barings as a provider of finance, and Gisborne and Co. as both shareholder and agent raised various problems due to the division and distance between the various actors.

These relationships were underpinned by both formal and informal contracts and governance to control opportunism between the different entities. The credit provided by Barings was formally contracted with clear terms and conditions for the loan and its repayment. This agreement was renegotiated annually and allowed all the parties the opportunity to exit or change the parameters of the contract.[419] There was a degree of flexibility in the contracts, as on various occasions the amount of credit was extended to cover unexpected costs.[420] Similar to the contracts between

[419] BA HC638, 4th July 1853 and 3rd July 1854, for examples of the annual renegotiation between the parties.
[420] BA HC638, 10th and 13th September 1849, discusses the need for an extra £4,000 credit in London to cover shortfalls and the renegotiation of the total loan agreement to account for it.

Gisborne and Co. and Barings, the contracts detailed the scope of activities, and gave recourse to law if any of the parties failed in their obligations.

Two other mechanisms helped to structure the relationship to overcome opportunism. First, due to their investment in the firm, both Matthew Gisborne and George Dougal acted as directors for the Tirhoot Co. and could therefore undertake a monitoring function and act as decision makers. This could protect both Gisborne and Co. and Barings from opportunistic behaviour or minority repression.[421] Second, Barings advanced the credit to Gisborne's partners in India who oversaw its disbursement, further reinforcing the monitoring mechanism. Beyond the stipulations of the contract, the directors of the Tirhoot Co. also offered personal guarantees to act as further collateral against the loan.[422] This helped to build confidence in the arrangement from the perspective of Barings, who would have recourse to recover the loan from the directors in the case of failed repayment.

These mechanisms enabled the relationship to last for 17 years, only unravelling due to natural disaster. Yet why did the shareholders choose the joint-stock model? Much of the focus within the contracts was directed at reducing opportunism better mitigated by the partnership form. The partners at Gisborne and Co. could, instead, have found partners to manage the venture, binding them through capital investment and incentivised by a profit share. There was also unease at losing control of decision making to the 'objectionable shareholders.' That they decided to adopt a novel approach to the problem is suggestive that other issues were at stake.

The investments into the assets of the factories and lands through the adoption of the zerat system saw increasing amounts of capital locked up in the ventures. The volatility of the market, and resulting years with losses, meant that capital could be locked-up for long periods. This

[421] Caroline Fohlin, "The Rise of Interlocking Directorates in Imperial Germany," *Economic History Review*, 52, 2 (1999), noted that the, "standard explanations of bank-firm [interlocking] relationships, interpreted in terms of the modern theoretical literature, emphasize the amelioration of information problems that often beset industrial undertakings." The interlocking directorates between Barings and Gisborne and Co., who subsequently held directorates with the Tirhoot Co. reduced the information asymmetries between the dispersed firms successfully.
[422] BA HC638, 19th July 1848.

encouraged the use of the joint-stock form as a risk-diversification strategy to overcome the constraints of raising larger sums of capital but also to combat untimely dissolution if investors needed to extract their capital before the factories could achieve profitability.

Untimely dissolution had become an increasingly costly outcome. The effort of various firms in the 1840s to achieve scale of capital through an increase in the number of partners was an alternative, but unstable arrangement. The problems of aligning the interests of large numbers of partners needed to achieve the levels of capital required for these investments was complicated by the potentially divergent interests amongst small numbers of partners. As Lamoreaux and Rosenthal predicted the joint-stock form became an increasingly preferred option to mitigate untimely dissolution.[423]

5.8 Experiments in creating a stable network

Gisborne and Co. had to negotiate the continued problems in the credit market and volatility in indigo, whilst addressing the growing importance of British exports. In organising the firm the partners faced the dilemmas encountered by the agency houses; the need to secure a sustainable source of finance, whilst avoiding the threats of hold-up and untimely dissolution present in bi-lateral partnerships. These conditions shaped the three recurrent transactions for credit, indigo and textiles undertaken by the firm.

The continued problems with the local credit markets and difficulties with internalising banking operations saw the bi-lateral partnership established with Barings. The relationship provided Gisborne and Co. with an annual trade credit of £150,000. Further annual credit of £20,000 to £30,000 was advanced to indigo concerns. Capital investment was also channelled through John Richards and the debt to equity type swap that formed the Ganges Indigo Co.

In response to the growing scale of the British export trade, the firm specialised and traded on its own account in these products, increasing the costs and risks of the trade. In place of Palmer

[423] See table 3, p.56.

and Co.'s network of firms, Gisborne and Co. created an internal network of partners, with five partners and various assistants spread between Calcutta, Bombay, London, and Liverpool to manage these transactions. This improved the flows of information and credit, but these investments raised the asset specificity of the transaction, motivating the unification.

The volatile conditions in the indigo sector, importance of the product as a remittance instrument, and need to control costs and quality in the production process, encouraged the integration of the transaction. The zerat system of production offered scope to control costs and quality, but increased the costs of fixed investments and subsequently asset specificity. Using the privately owned multiple-shareholder form of the Tirhoot Co. and the Ganges Indigo Co. the firm could integrate the operations whilst diversifying the risks of the investment.

These changes enabled the firm to manage the volatility and rising costs in trade and the indigo sector, achieve stable annual profits, survive the panic of 1847, and compete for 60 years. Yet, the decision to internalise the trading and indigo operations increased the need for managerial and financial capacity. Increasing the number of partners exacerbated difficulties in balancing their interests and threats of opportunism, whilst reliance on financing from Barings left open the possibility of minority oppression and untimely dissolution. How then, was the firm able to successfully manage these relationships?

Agency cost analysis revealed increasingly refined and robust formal agreements and informal governance mechanisms that sustained the partnership. The variable incentives of the profit share and deductions when coupled with the bonding mechanisms of capital investment built a stable partnership which had minimal turnover in partners, unlike Palmer and Co. The retention of capital, knowledge and capabilities enabled the network of partners to function effectively over distance.

Similarly, the increased use of legal contracts, the provision of collateral, and the monitoring enabled by the insertion of John Richards, gave the relationship with Barings greater stability and adaptability; a pattern of arrangements replicated in the management of the indigo factories, which were also long standing. These reconfigured contracts significantly reduced the threats of untimely dissolution and created a more sustainable supply of finance and access to key resources than those achieved by Palmer and Co.

Transaction cost analysis confirmed Williamson's hypothesis that as asset specificity of the transactions in trade and indigo increased due to the investments in physical assets and human capital, more powerful governance would be employed.[424] The growing threats of untimely dissolution, inherent in the increasing costs of the indigo factory assets, encouraged a change in ownership as projected by Lamoreaux and Rosenthal, leading to the use of the private multiple-shareholder company.[425]

As Larpent predicted firms had become more specialised, with Gisborne and Co. focused on British textiles and indigo.[426] However, the relationship with Barings and integration of the indigo operations runs counter to his prediction that successful firms would be smaller and better capitalised. Chapman's assertion that the firms were weaker than their predecessors was also not borne out in the case.[427] Agency cost analysis showed that Gisborne and Co. was able to build stable relationships to provide finance and the experimentation with the multiple-shareholder form in the indigo sector created a stable mechanism for diversifying the risks of investments.

The arrangement with Barings was certainly a distinguishing arrangement that allowed the firm to avoid the fate of many of its contemporaries in 1847. Barings had relationships with selected trading firms in Canton, Havana, and the US organised in a similar manner, whilst Rothschild also provided credit to merchants through a range of structures and partnerships.[428] These relationships would, though, have been limited in number, although the increase in the number of joint-stock banks in both Bengal and Britain later in the 19th century would have seen some

[424] See table 2, p.53.
[425] See table 3, p.56.
[426] 1833 Report from the Parliamentary Select Committee on Manufactures.
[427] Chapman, *Merchant Enterprise*, Roy, *Economic History of India*, 70.
[428] Orbell, *A history of Baring Brothers*, 30–31, Chapman, *The rise of merchant banks*, 19, 26-27.

increase in such arrangements.[429] This limits the generalizability of the case, although it is indicative of the experiments and growing efforts by entrepreneurs to develop sustainable models of external finance.

The chapter does develop a rationale to explain the change and diversification in the scale and organisation amongst the trading firms after 1830. The adoption of the network of partners conforms to the analysis in chapter 3 which showed the widespread change amongst the trading firms regarding the organisation of their international trading activities.[430] The integration of the indigo operations motivated some firms, amongst them Gisborne and Co., to increase in scale. This provides a plausible explanation for the trends shown in chapter 3, of a varying minority of the trading firms in the 1840s and 1850s that grew in financial size and managerial capacity.[431]

The evolution towards more specialised ventures, with a greater focus on production and plantation management, saw the firms' resemblance to traditional trading ventures, buying and selling goods on commission, begin to fade. However, the costs of integration increased the financing requirements which created a trade-off between obtaining sustainable finance and autonomy. The use of the multiple-shareholder form to achieve scale and stability in indigo opened the door for further experiments with financing and ownership by firms entering into new sectors such as tea in the 1850s.

[429] Geoffrey Jones, *British multinational banking 1830–1990* (Oxford University Press, 1995), found that the number of British banks with multinational operations increased in India and Asia from the middle of the 19th century.
[430] Chapter 3.7.2 outlines the different strategies used to manage international trade relationships.
[431] The combination of specialisation in British exports and indigo was also a strategy adopted by Gillanders and Co., described in chapter 8.2 and 8.3, suggestive that this was a common strategy.

Chapter 6 Tea, growth and take-off, 1850 to 1870.

6.1 Introduction

The Anglo-Indian trade in the years after 1813 had been characterised by the volatility of production in key exports such as indigo and the relatively high costs of financing in Calcutta. This resulted in slow and uneven growth. As the cases of Palmer and Co. and Gisborne and Co. have shown, entrepreneurs evolved the organisation of the partnership and experimented with multiple-shareholder ventures to overcome these constraints and reduce their risks. The period after 1850, however, saw changes to the structure of the Calcutta market as the scale and value of trade increased rapidly growing by 270 per cent between 1850 and 1870. The composition also changed as new industries such as jute and tea were established.

A detailed analysis of the emergence and growth of the tea industry, drawing on a range of price and production data and a commodity chain, shows that the costs to establish tea gardens in Assam encouraged firms to fully integrate the whole chain of production and marketing activities. The data-set from the Calcutta registers reveals that the use of the joint-stock form became increasingly widespread. By 1868, 70 joint-stock firms had been established in the tea sector. At the same time, the number of managing agents also tripled, providing services to more than 40 per cent of joint-stock firms.

The chapter concludes by considering various factors that could explain the decisions of firms to incorporate, and later to appoint a managing agent. These include increases in capital intensity that changed levels of risk and profit, alongside conditions in the tea sector, particularly problems of coordination between Assam, Calcutta and London. This discussion contextualises the environment and choices faced by the protagonists in the cases of the Assam Co. and Ogilvy, Gillanders and Co.

6.2 An evolving and diversifying market

The years prior to 1850 were characterised as a period of slow take-off in the Anglo-Indian trade. Volatility in production, constriction in the supply of credit and capital, and financial panics had kept growth in check. The downturn caused by the financial panic of 1847 was nonetheless quickly reversed and the growth in the value and volume of trade rapidly increased, particularly in the years after 1853, as shown in figure 17. The rebellion of 1857 had little effect on trade, with the major economic centres of Calcutta and Bombay located well away from the main areas of fighting around the Gangetic plain and Delhi.

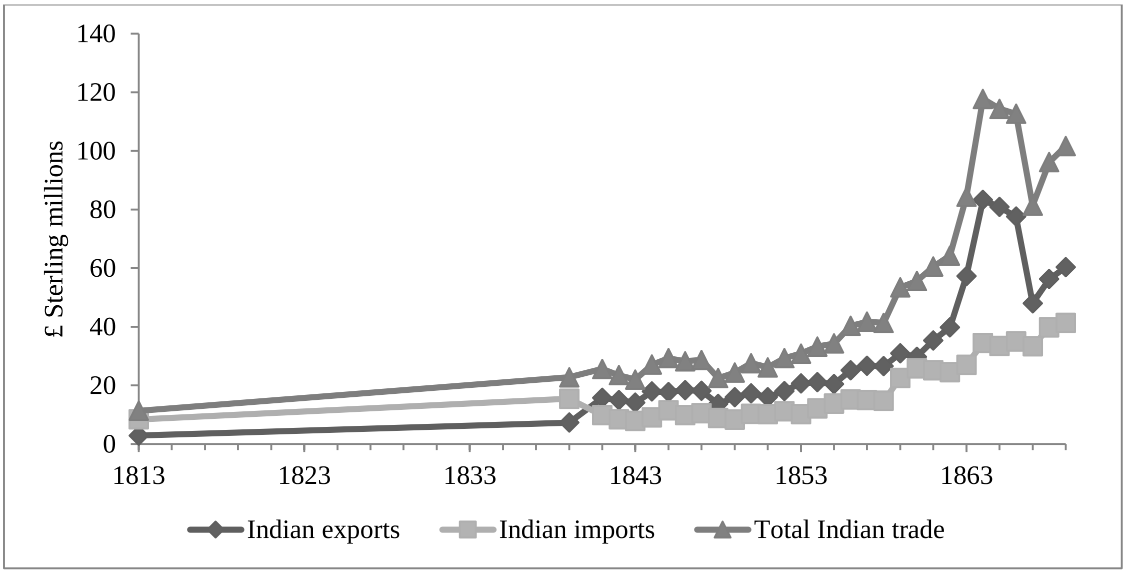

Figure 17. Real value of Indian exports and imports, 1813 to 1869.
Sources: Kirti Narayan Chaudhuri, "Foreign trade and balance of payments," Digital South Asia Library (DSAL) statistics section, No. 27 and 31 (1840–1865) and No. 18 and 24 (1860–69).
Notes: The values are real and have been deflated using the GDP deflator index in Stephen Broadberry, Bas Van Leeuwen, "British Economic Growth and Business Cycle, 1700-1870: Annual Estimates," *CAGE Online Working Paper Series*, 2010.

One of the notable trends was the rapid growth in the value of exports between 1860 and 1865. Disaggregation of this series by region shows that it was predominantly driven by a massive increase in exports from Bombay. The city was at the heart of India's cotton trade, which experienced a boom caused by the curtailment of cotton supplies to Europe from the American south during the American Civil War. Substitute supplies of raw cotton were acquired from

India, and the value of the trade grew from £5 million in 1860 to over £37 million in 1865.[432] While the resolution of the war in America led to the bursting of this bubble, the overall trend was still one of substantial growth for all the presidencies with the value of exports from Bengal more than doubling over this period.[433] This increase matched the wider trend in Britain's trade; the value of international trade as a share of GDP increased from 27.8 per cent in 1850 to 43.6 per cent by 1870.[434]

Various factors contributed to the take-off in India. The expansion of the rail network in India brought further improvements to transportation and communication. From its inception in 1853, over £95 million had been invested and over 4000 miles of track laid by 1875.[435] Additionally, the passage of the Companies Act in 1850 eased the process of incorporation. This led to, among other developments, the establishment of joint-stock banks, and by 1868 their number in Bengal had increased to 24, significantly improving access to local credit.[436]

The expansion of trade was accompanied by changes in its composition. The leading export goods between 1813 and 1849, opium and indigo, remained important, both in terms of value and volume. Indeed, opium was only supplanted by raw cotton as the most valuable export good. Indigo continued to be ranked as the fourth or fifth highest Indian export products in terms of value.[437] It was, though, generally a flat market in the years after 1850, with the total value of the indigo trade fluctuating around £2 million.[438]

---

[432] DSAL No. 24 (1860–69).
[433] Before the outbreak of the American Civil war India's average share of British imports of cotton was 20 per cent, this rose to 75 per cent after the first year of war. See Tripathi, *Oxford History of Indian Business*, 100–106, for a good overview of the causes and effects of the bubble.
[434] Kevin O'Rourke et al, "Trade and Empire," 106. Chapter 3.2, p.61, shows that the value had increased from 21.4 per cent in 1820 to 27.8 per cent in 1850, showing a significant take-off in the years after 1850, both in the Anglo-Indian trade and Britain's wider international trade.
[435] Rungta, *Business corporations in India.*
[436] BL Bengal Annual Registers, in 1834 2 banks were listed in Calcutta, in 1858 12. Figure 7, p.84, shows a slow decline in the interest rates offered by the Bank of Bengal in the late 1850s and early 1860s.
[437] The ranking is based on DSAL No. 22 (1860–69) a list of 25 major Indian export products in terms of value for the years 1860–1869.
[438] Figure 4, p.66, shows the contraction and stabilisation of indigo production during the 1850s.

A number of new products significantly increased in value during this period, further boosting the value of the trade. The production of jute increased markedly, with a total export value rising from less than £50,000 in 1850 to over £2 million by 1869, making jute the fifth ranked product in terms of value.[439] The trade in tea followed a similar trend rising from the 19th ranked export product in 1860 to the 11th in 1869. Exported tea was worth nearly £1 million in that year, approaching 2 per cent of the total value of Indian exports. This was the beginning of a remarkable period of growth in the Indian tea industry which would eventually rise to become the world's biggest exporter of tea by the end of the 19th century. From 1866 to 1883 India went from supplying less than 5 per cent of the UKs total imports of tea to 34 per cent.[440]

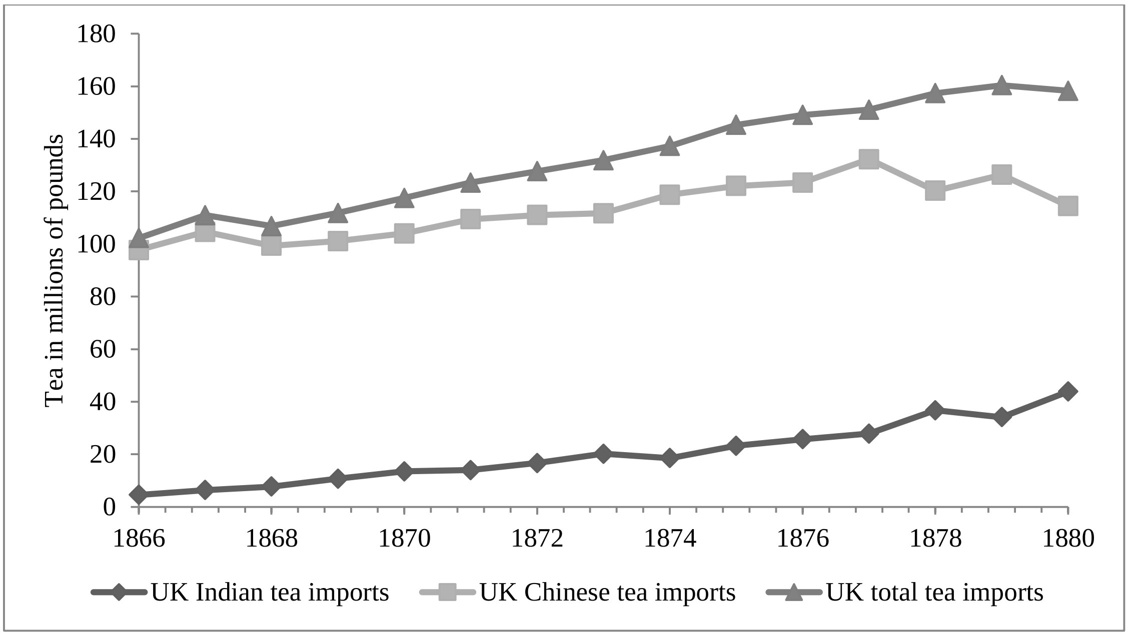

Figure 18. Total British imports of tea with Chinese and Indian shares, 1866 to 1880.
Source: Griffiths, *History of Indian tea*, 125.

[439] Tara Sethia, The Rise of the Jute Manufacturing Industry in Colonial India: A Global Perspective, *Journal of World History* (1996). The growth in jute production in the mid-19th century was driven by the rapid increase in international trade and a growing need for jute bags and gunny sacks to transport products. Jute had been produced in Bengal since ancient times but the first jute spinning factory was established in 1855.
[440] Figures from Percival Griffiths, *The History of the Indian tea industry* (Cloves and Son, 1967), 125.

6.3 The emergence of the Indian tea trade

The demand for tea in Britain had grown rapidly over the 19th century. Per capita tea consumption had risen from 1.36 lbs in 1813 to 3.76 lbs in 1870. By comparison, in the same period, demand for coffee only grew from 0.70 lbs to 0.87 lbs per capita.[441] This made Britain the world's largest consumer of tea, although demand was also increasing throughout Europe and the US.[442] Until the 1860s, this demand had largely been met by imports from China until the 1860s, as shown in figure 18. After the 1860s, Indian tea became a significant source of supply for the British market.

The tea sector in India was actively promoted by the British and colonial Indian government in an effort to break the monopoly held by China on tea production.[443] Indeed, the EIC had begun to investigate the possibility of cultivating tea in India towards the end of the 18th century.[444] Regions in the north west, around Assam and Bhutan, had been explored and indigenous tea trees found. As these regions were brought under EIC rule from 1826 more serious efforts were made to foster tea cultivation.[445]

The tea industry in India was slow to take-off. Tea was first exported from Calcutta to London in 1838, and during the decade between 1849 and 1859 the value of exports only rose from £27,263 to £60,533.[446] The slow growth in production between 1840 and 1853, shown in figure 19, improved somewhat from 1854 to 1865. However, the real growth took place in the following decade. Whereas in 1866 just over 6 million lbs of tea were produced, the output exploded to over 20 million lbs by 1875.[447] As opposed to indigo, which suffered sharp swings

441 Mitchell, *British Historical statistics*.
442 Stavacre, *Tea and tea dealing* (Sir Isaac Pitman & Sons Ltd, 1929), 16.
443 Michael Greenberg, *British Trade and the Opening of China, 1800-1842* (Cambridge University Press, 1951). The virtual monopoly China held on the tea trade led to various efforts to break the monopoly, including attempts to identify and develop new areas of cultivation.
444 Griffiths, *History of Indian tea*. Warren Hastings, Governor General of the EIC in the late 18th century, called for investigation into the possibilities of tea production in India.
445 Parts of the Assam region came under the control of the EIC after first Anglo-Burmese War in 1826, and gradually the entire region was annexed in the years after 1838.
446 DSAL No. 33 (1840 – 65) and No. 24 (1860–69).
447 Griffiths, *History of Indian tea*, 122.

in demand and production, rapidly growing demand in Britain meant that virtually all increase in Indian production could be absorbed by the British market.[448]

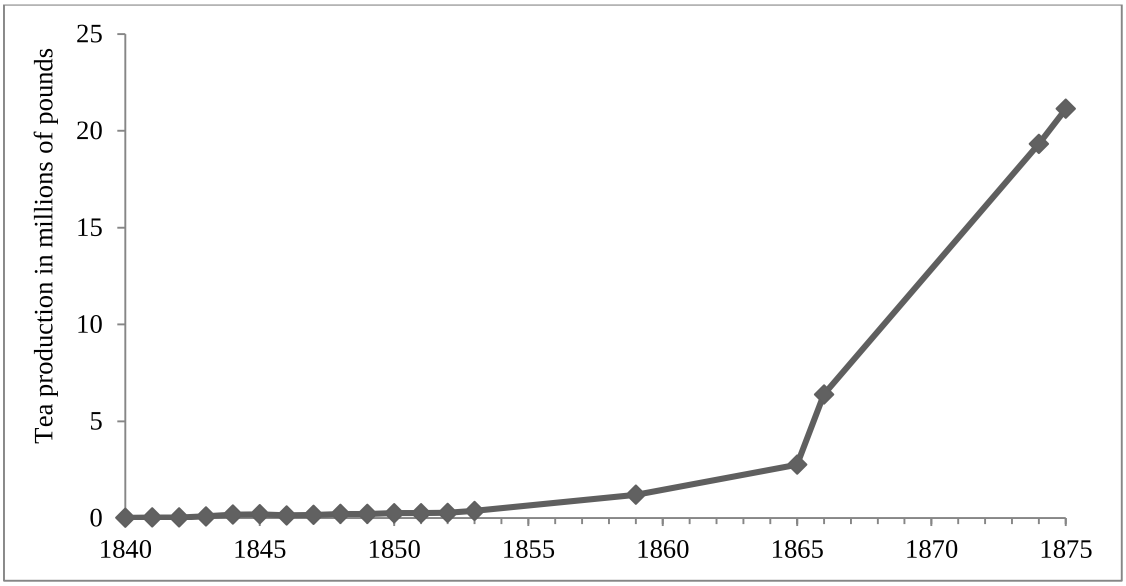

Figure 19. Level of tea production in India, 1840 to 1875.
Sources: Figures from Arbuthnot, *the Assam Company*, 407, the Jorehaut Company, 73, and Griffiths, *History of Indian tea*, 98 and 122.
Notes: The statistics for the total output of Indian tea in the years before 1870 are sparse. In the years from 1840 to 1860 the output of the Assam Co. is used as there were only a handful of other small tea gardens. 1859 is an estimate based on combined tea production in the Assam and Jorehaut Co.'s, the two largest firms. Griffiths provides estimates for 1865 and 1866. After 1870 the government started to collate statistics on output.

Figure 20 shows the total level of imports from both China and India sold through the London auctions over a ten year period. Consumption accounts for all purchases in the UK market and re-exports, so in effect all tea purchased by UK wholesalers. The divergence between the two series is distinctly less volatile than in the indigo market. The growing consumer demand and increase in production meant that the distance between supply and demand was low.

[448] A rough estimate from Griffiths, *History of Indian tea*, 98 and 125, showed that UK tea exports accounted for 72 per cent of the total Indian tea production for 1866. See figure 2, p.64, for the trends in indigo.

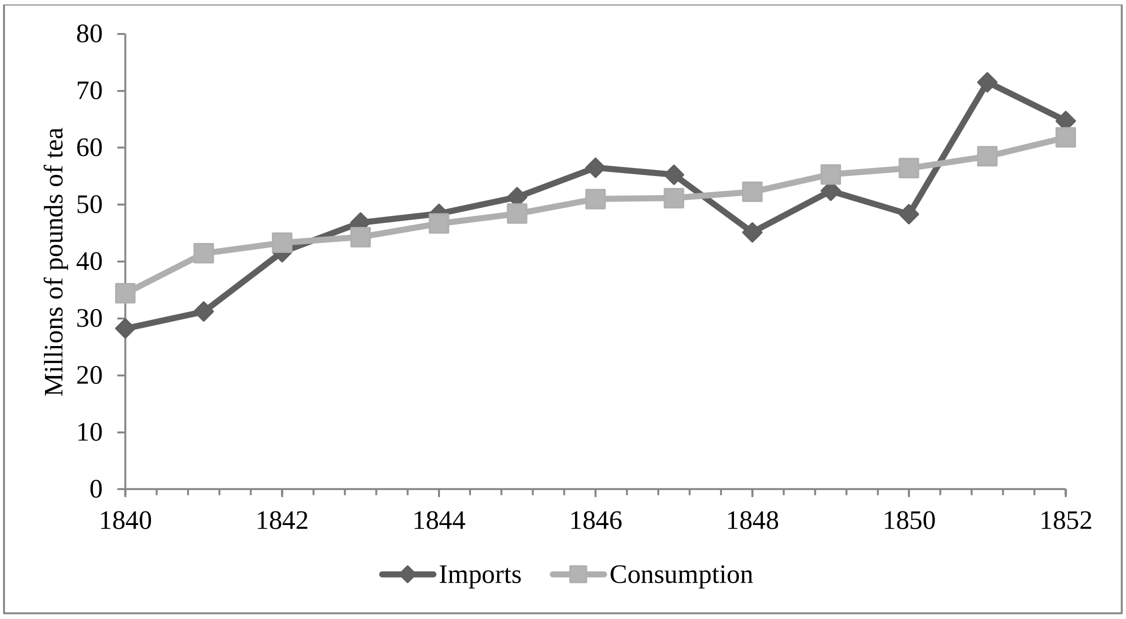

Figure 20. British imports and consumption of tea, 1840 to 1852.
Sources: HC2 2.381 William James Thompson and Sons, tea brokers, tea circular, annual report, statistics of tea 1847–1853 No.s 110, 124, 162.

For the 1850s and 1860s, we can use the price for tea produced by the Assam Co. as a proxy for the general price of Assam teas bought through the London auction, since the firm was the largest single supplier during this period. The mean average real price for a middling quality tea is shown in figure 21. The mean from 1846 onwards was 21d, and despite some year-on-year variation there is a slight upward trend, rather than the downward slope found in indigo prices. There was also much less price volatility as shown by the much lower coefficient of variation for tea (0.12) than for indigo (0.26).

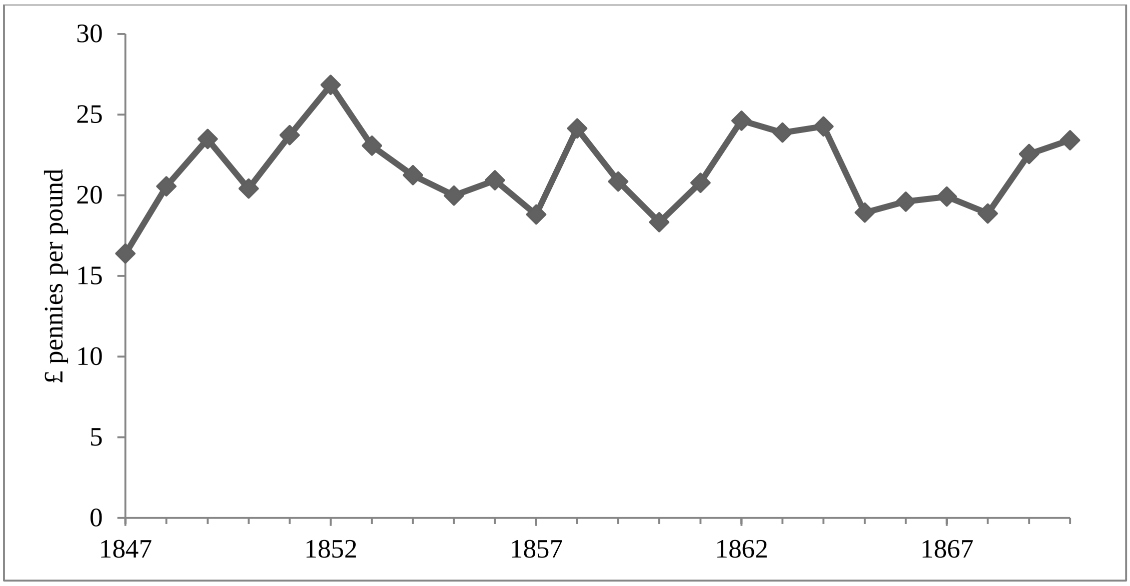

Figure 21. Average price of Assam Co. tea at the London auctions, 1847 to 1870.
Source: From Arbuthnot, *the Assam company*, 407.
Notes: These prices are what were described by the Assam Co. as the average price achieved at the London auction. The prices have been converted to pence. The values are real and have deflated using the CPI index in Feinstein "Pessimism perpetuated."

Rising demand and the possibilities of increased output created favourable conditions to attract capital from both British and Indian investors. For its first twenty years the Assam Co. was an effective monopoly. In 1858, however, the Jorehaut Co. became the second joint-stock company to enter the industry, whilst a further 50 tea gardens were owned by private firms and individuals. A tea mania in the early 1860s saw an explosion in the number of firms entering the industry. By 1862 Griffiths estimated that 57 private individuals, and five public companies, owned 160 tea gardens in northern India.[449] Although a crash in 1865 saw numerous failures and consolidation, the Bengal registry for 1868 listed 70 joint-stock tea firms, incorporated in both London and Calcutta.[450] The expansion of the 1860s radically reshaped the industry's structure. The effective monopoly of the Assam Co. was replaced by a competitive industry with a large number of participants.

[449] Griffiths, *History of Indian Tea*, 75.
[450] BL Bengal Annual Register and Directory, 1868. Rungta, *Business corporations in India*, found that between 1851 and 1865, 53 joint-stock tea firms were incorporated in India.

The impact of these changes can be seen in table 12, which shows the combined production output of the Assam Co. and Jorehaut Co. as a proportion of the total output of the tea industry in India. The combined production of the two firms in 1859 accounted for 80 per cent of the total output. The rapid expansion of both the number of firms and the area under tea cultivation, particularly after the expansion of production in Darjeeling and Cachar, saw output rise significantly throughout the 1860s and 1870s. The combined output of the two founding firms declined dramatically as a percentage of the total, falling to 46 per cent in 1865 and 12 per cent by 1874.

Table 12. Assam Co. and Jorehaut Co. production as proportion of total tea production, 1859 to 1875

Year	Assam Company (lbs)	Jorehaut Company (lbs)	Total Indian production (lbs)	Assam and Jorehaut as percentage of total production (%)
1859	810,680	156,400	1,205,689	80
1865	942,877	327,050	2,758,153	46
1866	653,211	393,774	6,387,988	16
1874	1,583,540	716,640	19,324,235	12

Sources: Arbuthnot, *The Assam Company*, 407-409, *The Jorehaut Company,* tea gardens appendix, and Griffiths, *History of Indian tea*, 98 and 125.

6.4 Organisation of the tea industry in Assam

The EIC had experimented with the cultivation of tea in the late 1830s in a number of locations throughout India, but due to the preponderance of naturally growing tea trees in Assam tea gardens were established there. These gardens were developed with the intent of moving them into private hands if tea cultivation on a commercial scale appeared viable. The Assam Co. was formed to take advantage of this policy and obtained the majority of these gardens from the EIC in 1839.[451] The location of the tea growing areas in Assam gave the embryonic industry some distinct challenges when compared to the indigo industry in Bengal and Bihar.

[451] The formation of the Assam Co. is described in chapter 7.2.

The mountainous, jungle environment in Assam meant that little infrastructure had been developed in this period and large distances had to be covered to reach the area from Calcutta. The problems of the region were aptly described by John Masters appointed as the first Superintendent of the Assam Co. He set out from Calcutta to take up his appointment and arrived in Assam two months later "under circumstances of much privation and difficulty … during the depths of the rains, and greatest height of the inundation … His doing so was greatly retarded by the difficulties noted above."[452]

The main route into the region was the river Brahmaputra, which was the vital lifeline through which supplies and labour were shipped in and the tea out. The distance was in the region of 1,000 km from Calcutta to the main station of the Assam Co. at Nazira. In 1840, an infrequent government-owned service oversaw boat transport up the Brahmaputra. As there were very few roads in the region much of the transport upon reaching Nazira was across country by elephant. Attempts by both public and private organisations were made to improve these conditions. These included the launch of steam powered boats to provide a quicker and more regular year round service.[453] There were also extended efforts to build roads to link the tea gardens with one another and river debarkation points.

The positioning of a new garden was the first critical task for firms setting up in the industry. Extensive surveying efforts were made to identify the location of both indigenous tea trees and the rich, deep soil that could support the growth of new trees. The first main transaction involved the purchase of the land and its preparation. Ownership of land in Assam was based on the award of long-term leases by the government. A certain portion was offered rent free, but with stipulations on the rate at which it must be cleared and developed.[454] This assured the holder of

---

[452] London Metropolitan Archive (LMA) MS27047, Calcutta Board AGM report 1840.

[453] There were efforts made by both the government and private firms to improve the transport between Calcutta and Assam. After the mutiny of 1857 more privatised services, particularly steam tugs, were provided to improve the time and regularity of sailings.

[454] Griffiths, *History of Indian Tea,* 71. The Old Assam waste land rules (amended in 1856), granted parcels of land for 99 years on the basis of 25 per cent being rent free in perpetuity, the remaining 75 per cent being rent free for 15 years and a gradated rent per acre for the remainder of the 99 year lease. In return the holder of the lease was obliged to clear 1/8th of the land in 5 years, ¼ in 10 years, ½ in 20 years, ¾ in 30 years.

a continuity of ownership at a reasonable rate of rent, whilst enforcing the development of the land. However, the rules encouraged speculative behaviour due to the low rent burden and length of the lease. This was exploited by speculators in the early 1860s who sought to obtain land simply to resell it as potential areas for tea production.[455] The competition for good planting land increased from both genuine and speculative interests.

6.4.1 The cultivation and production process

Once sites were identified the area needed to be cleared so that existing tea trees could be cultivated or new ones planted. There was a three year period from the planting of a new tree until it could begin to be harvested. The trees would reach maturity in six to nine years' time, and the crop per tree increased until reaching maturity.[456] The trees were regularly weeded and pruned to ensure they produced the 'flush' of leaves to be harvested. This marked the first process in the chain shown in table 13. The cultivation process was different to that of indigo. Tea was not a seasonal crop that could be harvested by peasants alongside their other crops. Instead, it needed a dedicated plantation and workforce.

The system of cultivation and manufacturing was initially based on Chinese methods and Chinese tea manufacturers were hired and transported to Assam to help establish the first gardens.[457] Differences in the environment encouraged experimentation and the system in Assam gradually evolved its own character.[458] The harvesting or plucking of the trees would

[455] Griffiths, *History of Indian tea,* 100. J.W Edgar, commissioned to report on the tea mania for the Bengal government in 1867, found a dramatic increase in applications for land in Assam in the early 1860s, one of the main factors that fuelled the bubble.
[456] Griffiths, *History of Indian Tea*, chapters four and five provide an excellent overview of the development of tea cultivation in India in this period.
[457] Charles Bruce, the superintendent of the EIC's tea gardens formulated a widely used manual for tea growing based on his conversations with Chinese tea manufactures. Reprinted in Antrobus, *the Assam Company*, appendix three. This bares some similarity to the transplantation of rubber production from Brazil to Asia in the late 19th century. Successful efforts were made to grow rubber trees in Asia, whilst experiments with the process for rubber extraction and production resulted in Asian rubber retaining the quality of Brazilian rubber but at far cheaper prices. Randolph Resor, "Rubber in Brazil: Dominance and Collapse, 1876-1945," *Business History Review* (1977).
[458] In China the best tea was obtained from the first 'flush' and so the trees were heavily plucked early in the season. Over time it was realised that the Assamese trees yielded good teas over a longer season, and so picking became less intense and spread over a longer period of time.

take place in April and would last until November. Plucking was differentiated between 'fine' and 'coarse' which affected the quality; coarse plucking resulted in lower quality tea but increased the quantity.[459]

Table 13. A commodity chain for tea production in 1865

Process	Season and time	Actor
Tea leaf cultivation	The trees were cultivated throughout the year.	Tea Company, 70 Joint-stock tea companies
Tea production process	Plucking and processing ran from March to November.	Tea Company
Shipping to Calcutta	The processed tea was boxed and shipped down the river which took two months.	Tea Company
Shipping to Britain	The deliveries were consolidated and shipped to London, taking around three months.	Tea Company
Public auction	The auctions at Mincing lane began in the summer when the first deliveries arrived.	64 Brokers coordinate the sales using the Mincing lane tea auction
Wholesale	Around the year sales	256 Tea dealers conducting sales to retailers

Sources: Griffiths, *History of Indian Tea*, Stavacre, *Tea and tea dealing*, BL Bengal Annual Register and Directory, 1868, BL Post Office London Trades and Professional directory, 1869. Notes: Activities directly undertaken by the tea companies are highlighted in dark grey, transactions undertaken directly by the tea companies are highlighted in light grey.

Once the tea was plucked it underwent five main processes. First withering, which saw the leaves spread on frames and a dry heat introduced to extract the moisture from the leaves, leaving them

[459] In an interview conducted by the author with Hardeep Singh, Manager at the Addabarie Tea Estate, Balliparra, Assam, Mr Singh discussed historical and contemporary methods of tea harvesting. The difference between fine and coarse plucking was determined by the number of leaves plucked together; two was fine, three or more was coarse. The regularity of the plucking affected the quality, with younger leaves being tenderer and better quality, but allowing trees longer periods between plucking increased the amount of new growth and quantity. Producers needed to find a balance in the plucking to achieve quality and quantity.

soft and pliable. Further moisture was removed by rolling the leaves, either by hand or passing them through a mangle like machine. Having extracted the moisture from the leaves, they were spread on a cement floor or a tray of porcelain or glass to allow a process of oxidisation. This fermentation fundamentally changed the colour and the enabled the distinctive flavours to develop. The leaves were then dried by firing in a pan over a charcoal brazier until they were dry and brittle. This was the general process adopted throughout the industry by 1870, although various attempts were made to mechanise or control the processes.[460]

6.4.2 The importance of labour and management

The labour required for these processes was split into three categories. First, large numbers of 'coolie' labourers were needed to undertake the clearing, cultivation and harvesting. Second, skilled labour was needed to manage the production processes. Finally, European managers oversaw both groups. There were distinct challenges involved with the hiring, contracting, and management of each group.

Coolie labour was hired directly by the tea firms, often from Bengal and Bihar, and brought to Assam. This marked the second major transaction undertaken by the firms. Recruiting outside of the region incurred significant costs since the labourers had to be transported to Assam and subsequently housed and fed. Conditions on the journey and the gardens were often deplorable, with mortality rates of over 30 per cent in the 1860s. Moreover, bad conditions and harsh treatment encouraged thousands of labourers to abscond. This was a significant problem for the firms, as knowledge of the conditions became more widespread they faced the expense of hiring replacements from an increasingly scarce labour pool.[461]

---

[460] Griffiths, *History of Indian tea*, 489, discussed the planter's experimentations such as the use of fans and charcoal stoves to speed up the heating and drying processes, which alongside the change in plucking regimes saw the Indian system become increasingly distinct from those in China.

[461] Ibid, 270. The majority of the labourers came from impoverished areas in Bengal and Bihar, initially attracted by the offer of waged work; however as knowledge of the conditions on the gardens worked back to the regions recruitment became more difficult. In 1863 legislation entitled the Inland emigration Act was passed granting plantation owners the right to imprison absconders. This was amended in 1865 and a minimum wage, limit on working hours, and licencing of recruiting agents sought to improve conditions for the labourers.

The government embarked upon a number of reform attempts in order to improve the situation.[462] Limited working hours, and stipulations that all firms maintain a hospital certainly improved the conditions. A general increase in the wage from Rs. 2 to Rs. 5 per month occurred in the 1860s and increased the supply of willing labour, but the reforms led to an increase in overall costs.[463]

The need to attract specialised labour and management was also problematic throughout the period. In the 1830s, production expertise had to be obtained from China. This was difficult since the Chinese state was adamantly opposed to allowing experts to leave and few Chinese were willing to take the risk. In 1839 Bruce noted that he had only two Chinese tea makers in his gardens, and his dependence on their expertise imposed strict limits on his ability to expand production.[464] These problems gradually eased as locals were exposed to the methods and passed on these skills to others.

Similarly, the management cadre of the gardens was almost solely drawn from the European community. They undertook a range of functions including the oversight of cultivation and production, book-keeping, and surveying. Although a steady supply of young men in Britain pursued the excitement and dreams of riches of a career overseas, those with relevant experience either in tea cultivation or plantation management were hard to find. Edward Money, in a scathing critique of the planters in the 1860s, observed, “Tea planters in those days were a strange medley of retired or cashiered army and navy officers, medical men, engineers, veterinary surgeons, steamer captains, chemists, shop keepers of all kinds, stable keepers, used up policeman, clerks, and goodness knows who besides.”[465] This lack of expertise led to the poor production management resulting in poor quality tea.

---

[462] HC 72-2 1861 East India Indigo Commission, papers related to indigo cultivation in Bengal.
[463] Ibid, 99 and 105. The need to feed the labourers was also a major expense. Many of the firms guaranteed the labourers a portion of rice at a fixed price, often Rs. 1 per maund, whilst the market price for rice increased to between Rs. 6 and Rs. 10 in the mid-1860s.
[464] Ibid, 55.
[465] Ibid, 97. Money observed that the speculative nature of the sector acted as a magnet for the underqualified and over-adventurous.

Experienced and knowledgeable managers who could control costs and increase quality in the midst of a hostile environment were a critical factor in a tea firm's success. Yet the expanding number of firms and the limited supply of such managers resulted in intense competition for this key resource. This was exacerbated by the environment, which took an often fatal toll on those working there.[466] The loss of expertise and the costs of finding and training replacements could be very high for the firms given the small number of experienced managers.

6.4.3 Conducting the trade

At the end of the production process, the leaves were sorted, graded, and packed into chests for shipment. The tea was moved first to Calcutta where smaller firms auctioned their crop for export. Many of the larger firms, however, exported their crop directly to London. In Britain, the tea entered a well-established auction system for the final transaction. On arrival, the tea was stored in bonded warehouses. It was tasted and its quality determined by a broker acting for the tea firm through which a target price was agreed. The lots and prices were published and distributed to interested buyers, who would also use brokers to sample the tea.[467] The subsequent auction took place at Mincing lane.[468] In 1841 the scale of the tea industry in London was already substantial with an extensive network of agents, brokers, wholesalers and retailers. The Post Office directory for that year listed seven agents, 17 brokers, and 98 wholesale tea dealers, of which 12 were also listed as retailers.[469]

The critical element within this process was the grading of the tea quality. Quality was determined by a number of factors. The situation of the gardens, particularly the altitude and

---

[466] LMA MS27047, Calcutta AGM report 1841, noted the death of three managers in one division that year. Reports of death and illness amongst their employees were a regular refrain in the Calcutta Board meetings of the Assam Co.

[467] LMA MS8803/1, Catalogue of Assam Company tea for sale, June 9th 1863, prepared by Thompson and Co. The catalogues listed the type of teas to be sold and the various lots in which they were available. The conditions of sale were also detailed, laying out the payment schedules and rights of the buyers and sellers.

[468] The London tea auctions at Mincing lane ran continuously from 1706 until 1998. The first sale of tea manufactured in the EIC gardens in Calcutta, was sold at auction through the broker Mackenzie, Lyall and Company in 1841.

[469] BL Post Office London directory, 1841.

soil, affected the basic growing conditions which, in turn, determined the underlying taste of the tea from a particular region or even an individual garden. The picking and timing of the harvest and care of the leaves in the manufacturing process, particularly ensuring the leaves were not torn, also affected the taste and quality.[470]

The effect of quality on price can be seen in London auction prices for a range of tea types. Figure 22 shows the highest achieved prices of five grades of tea, from the cheapest, Bohea, to the most expensive, Pekoe. The differential between the highest and lowest prices was between 32 and 56 pence per pound, with an average of 43 pence. The value of the difference was 90 per cent of the cost of the highest grade, whereas it was 43 per cent for indigo, showing the significantly greater payoff of achieving better quality in the tea market.

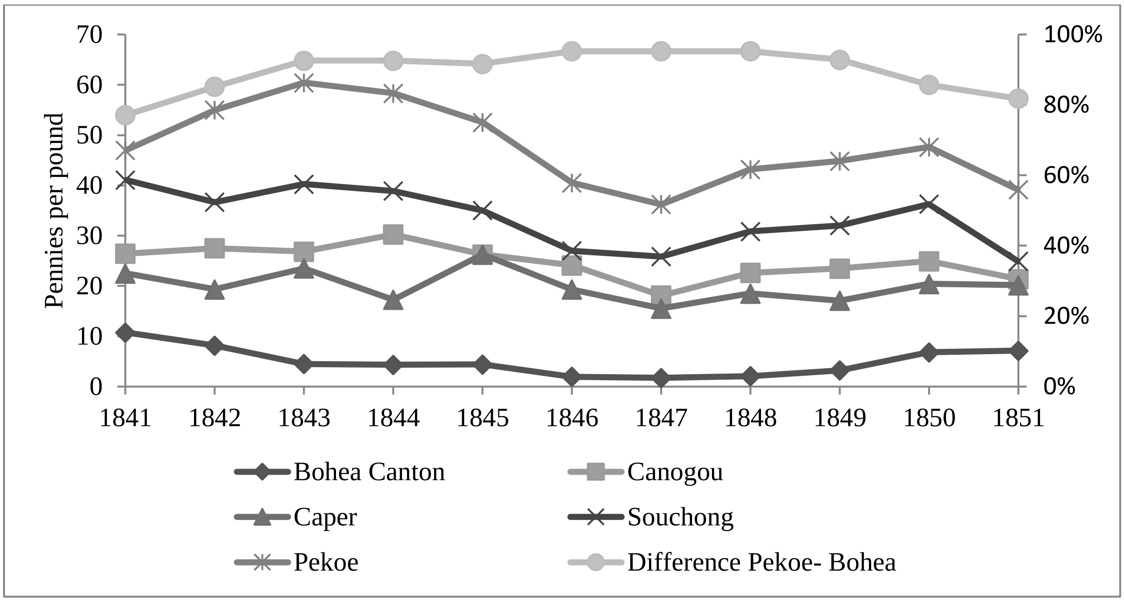

Figure 22. Highest prices achieved for five grades of tea at the London auctions, 1841 to 1851.
Source: BB HC2 2381, William James Thompson and Sons, tea brokers, annual report and statistics of tea, Nos. 110, 124, 162.
Notes: The prices have been converted to pence. The difference between the highest and lowest grades is expressed a percent of the high grade price. The values are real and have deflated using the CPI index in Feinstein "Pessimism perpetuated."

The ability to produce high quality tea in quantity was a difficult balancing act. Although there was an incentive to produce high grade tea and achieve significantly better prices, this required

[470] Stavacre, *Tea and tea dealing,* 12-14. Today there is a well-established international grading system which draws on antecedents in the 19th century. Grades such as pekoe, souchong, and fannings are based on the leaf size and quality of production.

investment in specialist workers and managers to improve the harvesting and production processes. Instead many firms in the 1860s simply sought to increase production to meet the increasing consumer demand. Roberts, director of the Jorehaut Co., believed that the general quality of Assam tea was so bad in 1866 that it adversely affected the perception of the whole industry in Britain, leading to a downturn in Assam tea prices which compromised the profitability of even the best run tea gardens.[471]

6.5 The effects of fixed costs and financing on the role of the firm

The environment in Assam and the subsequent need for fixed investments in the infrastructure and gardens had implications for the financing of the sector. Table 14 develops an example taken from 1860 to show the distribution of costs and profits throughout the tea chain. The most noticeable difference with indigo was the high fixed investment costs needed to get the gardens to a state that enabled them to become productive. The costs of clearing the land, cultivation and the investment in buildings, machinery and equipment were extensive. With three years before a tree could be harvested productively, a further period with limited revenues needed to be accounted for. Based on this example, the fixed costs per pound would have to be depreciated across a number of years before a profit could be achieved.

The variable costs of production were the largest portion of the total costs. These were made up of the annual expenditure on wages and costs of bringing labour to the gardens. The purchase of the materials needed to undertake the production and packaging of the tea in a growing season, such as tea seeds and chests for packing, was also a portion of these costs. These accounted for around two thirds of the total cost per pound.

[471] Griffiths, *History of Indian Tea*, 106.

Table 14. Costs and profits in tea production, 1860

Process	Costs	Profits
Tea leaf cultivation	Fixed costs: An estimated cost of Rs. 350 per acre was needed to make land tea baring. Output per acre ranged from 180 lbs to 240 lbs in the early 1860s. Assume 1 lb of tea is Rs. 1.4	
Tea production process	Production costs: 1 pound at factory cost per acre = Rs. 2.4 per lb	
Shipping to Calcutta	Freight Cost: Nazira (area of tea cultivvation in Assam) to Calcutta estimated at Rs 0.6 by steam boat.	
Shipping to Britain	Insurance, freighting, tariffs and storage costs were estimated between 8% of the final London price, in this example Rs. 0.4 per lb from the sale price of Rs. 4.	
Public auction Wholesale	Price achieved in the London auction in 1860: S.d. 1.7 per lb average price for Assam Company middling quality (converted to Rs. 4). Brokerage fees of 1% or Rs. 0.04	Cost of 1 lb of tea at London auction is Rs 3.4, excluding fixed cost investments. (Profit for the firm is Rs 4.0 - Rs. 3.4 = Rs 0.6.)
Total	Rs. 3.4 (or Rs. 4.8 including fixed costs)	Rs. 0.6

Sources: LMA MS9935, letter titled Response by Mackay to the remarks by Burkinyoung, 23rd April 1862. LMA MS09936, Account of sales, Thompson and Co September 1856. Antrobus, *the Assam company*, 407. Griffiths, *History of Indian tea,* 100. Kumar, et al eds. *The Cambridge economic history of India*.

Notes: Fixed Costs: Antrobus estimated Rs. 350, including land clearances, hiring labour, and equipment, to bring an acre to the point of cultivation.

Production costs: Total expenditure minus fixed cost investments was Rs. 364,287 for 3,999 acres, to produce 870,633 lbs. This gave an average of 218 lbs produced per acre at a rate of Rs. 2.4 per lb.

Transport costs: Estimated at Rs. 0.06 per ton mile by boat, with steamboats Rs. 0.12. Purnea to Calcutta is 283 miles.

Freight, insurance, London Warehousing and brokerage fees were taken from tea broker, Thompson and Co., account of costs and services in 1856 which estimated these to be 8 per cent of the total London sale price per shipment.

The remaining costs were incurred in the transportation of tea from Assam to its eventual sale in London. Many of the firms exported directly to Britain and used brokers rather than a corresponding trading firm to conduct the sales. An account of sales from Thompson and Co. in 1856 broke down the costs of shipping a consignment of tea from Calcutta to London for the Assam Co. On a total revenue of £18,276, raised from the sale of the tea consignment, the Assam Co. were charged for fire insurance (£46), freight costs per chest (£779), the use of facilities at St Katherine's Dock (£459), sales expenses such as producing the brochure (£20), a brokerage fee of 1 per cent (£182), and interest on these charges (£19). These charges totalled £1,505 or around 8 per cent of the total revenue generated in London.[472]

The profits were all extracted by the tea firm. In this example, the profit includes none of the fixed costs. The initial investments and further expansions in production would certainly reduce the profits as the costs were depreciated, or the profits used to invest in new areas of cultivation. The potential, though, to make a 15 per cent margin on a product with a rapidly increasing demand was attractive enough to encourage firms to take on all the investment risks to found and run a tea garden.[473] The model established by the Assam Co. was of a completely integrated venture which produced and marketed the tea.

The environment in Assam and the integration of the production and marketing operations created distinct challenges for the firms. They had to manage a diverse set of functions, many of which were executed at distance. The coordination between the gardens in Assam and the offices in Calcutta, separated by a thousand kilometres of hard terrain, was vital to ensure the transfer of resources and product in both directions. Particularly important was ensuring that labour could reach the gardens and that the tea could be shipped back to Calcutta efficiently. There was also

[472] LMA MS09936, Account of sales, Thompson and Co. September 1856.

[473] Chapman, "Financial Restraints on the Growth of Firms in the Cotton Industry." As a comparison Chapman found that returns on Cotton had declined significantly after 1825, both for manufacturers and merchants. One Glasgow merchant estimated in 1836 that margins on Cotton were in the region of 3 to 5 per cent. Entrepreneurs would be encouraged to look for more profitable opportunities and investments.

the need to manage the flows of finance and products over the 10,000 kilometres seperating Calcutta and London.

In Assam, a range of activities needed to be managed. Obtaining land and labour of requisite quality and quantity, whilst constructing vital infrastructure, were major tasks and costs. Although increasing demand and stable prices enabled the generation of good revenues, costs had to be carefully controlled to ensure profitability. Information relating to both the fixed costs in infrastructure and the variable costs associated with yearly harvests was a critical component of the management of the gardens. Expertise and knowledge in balancing decisions about plucking, planting and the production process significantly influenced both the quality and quantity of the output.[474] In Calcutta, management needed information to balance these costs against anticipated revenues, allowing the firm to better determine profitability and performance. Done successfully this enabled major decisions such as expansion and improvements to be undertaken without threatening financial stability.

Finally, there was the need to integrate these activities with the market in London. The firms needed to match supply with demand and carefully monitor the market for the trends in the prices of the various types and qualities of tea being offered. Quality and taste were important factors to track, as the Indian teas had to build a position in the British market to compete with the more established Chinese teas, and the flow of information was tightly focused around these issues. The firms had to address the challenges of co-ordinating these flows between the diverse locations of the firms' activities.

The heaviest financial requirements rested in Assam, where expenditure on the clearing and cultivation of the gardens, construction of infrastructure, and labour costs were borne. These were divided into fixed capital investments, particularly when opening new gardens and

[474] Griffiths, *History of the Indian Tea,* 119, noted that, "good prices in one year frequently led to coarse plucking in the following year, with a consequent fall in prices which then provided the discipline necessary to ensure a return to better standards."

constructing infrastructure and the variable costs related to cultivation, production and labour accounted for on a monthly or annual basis.

To undertake these activities two forms of finance were used. Many of the initial start-up costs, investments in infrastructure and clearing the gardens, were funded through capital raised from shareholders. The capital was raised through deposits and calls on the shares, which were a small percentage of the nominal value of each issued share. Indeed, joint-stock companies were only legally incorporated when 25 per cent of the nominal capital had been paid-up. This provided capital to begin the cultivation of the gardens and obtain resources such as labour in the first years.

When firms sought to expand their operations they could raise more capital from the shareholders through calls on capital, or use retained earnings, to provide the finance. Securing financing for expansion through calls was not a guaranteed outcome. Although the firm could make a call, with the threat that shareholders who failed to pay would forfeit their shares and any existing paid-up capital, shareholders could block calls through AGMs. Alternatively, expansion funded out of retained earnings would reduce profits to be used as dividends and shareholders would have to be convinced this was a viable strategy. Both options were dependent on maintaining alignment with the interests of the shareholders.

Once the gardens were productive and harvests were generating revenues, it was conceived that the annual costs of running the gardens would be drawn from the revenues of the previous year's harvest. The revenues were, though, generated in London after the sale of tea at auction and had to then be remitted back to India. Due to the timing of the sales and the planting in the gardens, synchronisation could be difficult to achieve. As shown in the previous chapters remitting funds in a cost-effective manner was a significant and potentially costly challenge for the firms. Therefore, the funding of the annual production costs was usually in the form of short-term credit obtained from the growing number of joint-stock banks in Calcutta.

The managers and directors of the tea firms had to continuously coordinate information on the relative costs of capital and credit, and synchronise the financial requirements between Britain and India. Decisions about raising more capital, using local credit, or remitting funds reflected a constant trade-off between the relative costs of each financing source and the timing of spending requirements.

6.5.1 A different form of business organisation

The capital requirements to develop and operate the gardens such that they could become profitable were far more extensive than in the indigo sector. The need for infrastructure investments, and the delays in waiting for revenues to be realised, required firms to have greater capital reserves. The rapid increase in production and growing scale of the industry also offered great scope for expansion and possibilities of achieving economies of scale through the efficient harnessing of labour and management costs.

Another significant difference with the indigo sector was the required transactions for labour, both for hiring coolies and recruiting specialists and European managers. Due to the expansion of the sector and the high mortality rates these were recurrent transactions. At the other end of the chain the price of the tea achieved at auction was strongly determined by its quality. The differentiation between quality grades had a greater impact on price and was more rigorously enforced in tea than in indigo. Firms had to find a balance in making investment decisions to achieve both quantity and quality of production.

The increased level of capital investment and subsequent need to manage the costs and quality of the production process acted as spurs to integrate the chain. As a result many of the tea firms integrated the entire chain of activities, only using brokers in the London auction process. This significantly changed the risk profile for the firms, since they were now entirely exposed to all of the costs. It also reshaped the transactions for information. Rather than trading firms acting as hubs of information for the network of producers and traders, the integrated tea firms now had to coordinate information flows between the different parts of the organisation.

The increasing need for capital to integrate operations reconfigured the characteristics of the transactions for tea. The investments increased asset specificity and the costs of untimely dissolution, anticipating a greater use of unified governance. However, the continued importance of coordinating widely dispersed agents suggests that issues of opportunism and informational asymmetries were also significant factor to overcome. The growing importance of human capital to manage and improve the gardens also raises questions about the best form of ownership and organisation needed to attract and retain talent.

6.6 The emergence of the corporation

The challenges of the tea sector encouraged entrepreneurs to adapt both the ownership and organisational structure of the firm. The experiments in the indigo sector in the 1840s and 1850s with multiple-shareholder ventures were indicative of the growing interest in finding mechanisms to deepen capital reserves and diversify risk. These had predominantly been experiments with private companies. Indeed, prior to the 1840s the joint-stock form was virtually unknown in Calcutta, with only a handful of banks and infrastructure projects incorporating through government charter. The first commercial register to identify firms with tradable stock was in 1843, which listed eight firms.

However, from the 1840s onwards the joint-stock form began to find greater adoption in a variety of sectors. By 1858 the registers provided more details, dividing firms into sectors including banking, transportation and tea, listing capital, number of shares, and year of registration. Figure 23, shows that from 1853 to 1858 the number of corporations almost doubled to 30, but it was the next decade that rapid expansion occurred, with 173 recorded in 1868. Both the scale and trends in the timing of the take-off are supported by data collated by Rungta, which also showed a rapid increase in the number of registered joint-stock firms after 1860.[475]

[475] Rungta, *Business corporations in India*, appendix four and appendix eight. This showed an increase from 24 registered joint-stock companies in 1850 to 373 in the whole of India by 1865. These figures are for all firms registered between 1851 and 1865, whereas the registers only account for firms in a specific year.

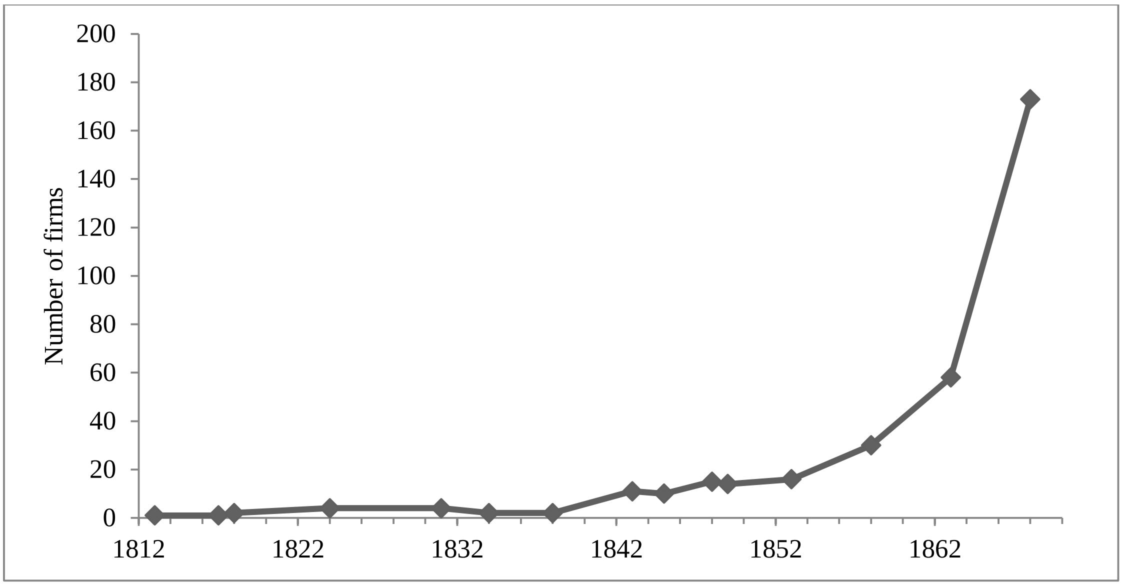

Figure 23. The number of joint-stock firms in Calcutta, 1813 to 1868.
Source: BL Bengal Annual Registers, 1813, 1817, 1818, 1824, 1831, 1834, 1838, 1843, 1845, 1847, 1848, 1849, 1853, 1858, 1863, 1868.

This rapid expansion was associated with changes in the legal status and procedures for incorporation. In 1850 the Indian government passed an incorporation act, similar to one passed in Britain in 1844, which reduced the costs and bureaucratic requirements of incorporation. Prior to 1850 incorporation was granted by an act of government and was a costly procedure. Likewise, an act granting limited liability as an integral part of incorporation was passed in India in 1857, only two years after its passage in Britain. This was a significant incentive for shareholders, since it reduced their exposure to the debts of the firm. The importance of limited liability is borne out by the rapid increase in the number of incorporations in the years immediately after 1857.

A range of securities were traded throughout the 19th century, and the number of brokers and other intermediaries increased throughout the period to facilitate these sales.[476] However, a formal stock exchange was not created in Calcutta until 1908. Prior to that traders met under a

[476] Securities such as government bonds had been promoted and sold by the agency houses. As the number of joint-stock companies increased so did the number of specialised stock brokers. BL Bengal Annual Register, 1858, listed 23, which rose to 40 in 1868, indicative of a growing and active market for shares.

'neem tree' to conduct their business.[477] The lack of a structured market place and exchange facilities may have impeded the issuing process, whilst giving the perception that the trade was unregulated and therefore potentially unsafe, delaying the creation of a more buoyant market for securities and limiting the joint-stock form's further spread in Calcutta.

Additional factors that may have contributed to the timing of this take-off can be observed through analysis of the distribution of joint-stock firms by industry. Rungta categorised nineteen industries in India in which joint-stock firms were located which have been used to classify the firms in the 1868 commercial register. The distribution from both sources is shown in figure 24. In both data-sets four sectors emerged in which the joint-stock form proliferated. These were banking, tea, presses used to compact cotton into bales, and navigation.[478]

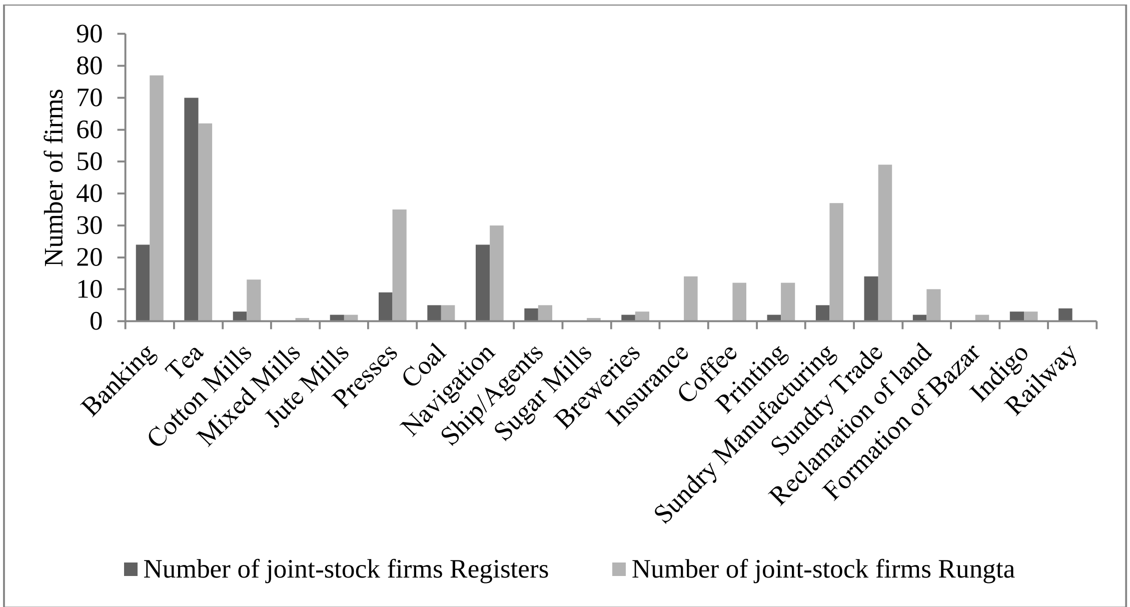

Figure 24. The number of joint-stock firms by sectors, 1868.
Sources: Data from Rungta, *Business corporations in India,* Appendix 8, BL Bengal Annual Register, 1868.

[477] The phrase originally referred to a tree where traders would meet, similar to Lloyds Coffee shop in London.
[478] Some of the discrepancies between the data sets are due to differences in construction. Rungta included all of India, hence the limited number of coffee ventures and cotton mills in the Calcutta data as these industries were located elsewhere. Other issues of construction explain the difference in the number of insurance companies. Various insurance companies were listed in the registers but were not listed or noted as joint-stock. The other large concentrations are the Sundry trade and Sundry manufacturing categories, which accounted for a wide range of local trading and manufacturing concerns. It would be useful to calculate the proportion of joint-stock firms to the total firm population in each sector but unfortunately these figures are not available.

The thinness of the Calcutta credit markets encouraged the expansion of joint-stock banking, with the number of banks growing from six to 24.[479] As the scale of the trade increased, investment in physical infrastructure was also needed. This led to an increase in the formation of firms in transportation, both international (Peninsular and Oriental Steam Navigation Company), and within Bengal (the Steam Tug Association), as well as the infrastructure required to support them (Calcutta Docking Company, Bonded Warehouse Association). The emergence of new industries and opportunities was also seized upon by investors in both India and Britain. The cotton boom of the 1860s saw a rapid increase in investment resulting in the growing number of cotton mills and presses.[480] It was the Tea sector that experienced the greatest boom, however, rising from one joint-stock firm prior to 1858, to 70 in 1868.[481]

The rationale for the distribution of joint-stock firms between industries can be analysed in terms of the capital requirements for each industry. Rungta found 214 of the 373 firms registered between 1851 and 1865 had data on paid-up capital. Table 15 shows the number of joint-stock firms with paid-up capital and the total paid-up capital in each sector. Through the simple division of the number of firms by the total paid-up capital a mean average per firm in each sector can be used as a rough estimate for capital intensity.

The banking sector had not only the largest amount of paid-up capital but also the highest capital per firm between 1851 and 1865. The other sectors with high capital intensity were coal, cotton and jute mills, but these were all sectors that had small numbers of registered firms. The tea industry despite having a large amount of capital invested was moderately low in terms of capital intensity, with an average tea firm having less than one third of the average capital of a bank, and less than half that of a Cotton Mill.

---

479 BL Bengal Annual Register, 1868. Rungta, *Business corporations in India,* appendix 8, found 77 joint-stock banks registered throughout India between 1851 and 1865.

480 The number of cotton mills and presses were significantly lower in the Calcutta registers as the cotton sector was located in Bombay where conditions for growth were more favourable.

481 BL Bengal Annual Register, 1868, there were 70 listed tea firms although four of those were noted as being in voluntary liquidation. Rungta recorded 62 tea firms of which only 53 had paid-up capital, so the number of active tea firms may have been lower than recorded in the register.

The average capital per firm does not, however, show the variance within a sector. Rungta identified seventeen joint-stock tea firms launched in London that had paid-up capital in 1866.[482] The mean nominal capital was Rs. 430,000 (£43,000), slightly higher than the mean for the wider sample but nonetheless comparable. However, analysis of the paid-up capital within the group revealed significant variance. The largest firm, the Assam Co., had a paid-up capital of £200,000 and c.300 shareholders, whilst the smallest firm had a paid-up capital of just £10,626. The mean average was £41,736, although eleven of the firms had paid-up capital below £40,000.[483]

Table 15. Indian joint-stock firms paid-up capital and capital per firm, from 1851 to 1865 and 1866 to 1882

	1851 - 65			1866 - 82		
Industry	Capital Rs. (000s)	No. of Firms	Paid-up Capital per firm Rs. (000s)	Capital Rs. (000s)	No. of Firms	Paid-up Capital per firm Rs. (000s)
Banking	44,895	30	1497	31,639	227	139
Tea	21,725	53	410	17,692	91	194
Cotton Mills	7,276	8	910	35,767	42	852
Mixed Mills	1,800	2	900	11,033	13	849
Jute Mills	453	1	453	31,257	30	1042
Presses	5,514	17	324	12,681	39	325
Coal	4,495	4	1124	1,695	3	565
Navigation	9,115	14	651	3,465	8	433
Railways	0	0	0	2,416	4	604
Ship/Agents	1,071	4	268	122	1	122
Cooperatives	0	0	0	288	17	17
Sugar Mills	253	1	253	716	3	239
Breweries	600	1	600	384	2	192
Insurance	1,472	5	294	2,569	19	135
Miscellaneous	31,401	74	424	57,363	122	470

Sources: Data from Rungta, *Business Corporations of India*, Appendix 12, paid-up capital per firm added by this author.
Notes: The total capital is divided by the number of firms to give capital per firm, which is used to approximate capital intensity. The sample sizes are however small and not corrected for outliers that may significantly affect the mean.

482 Rungta, *Business corporations in India*, appendix 7.

483 Ibid. In terms of shareholders the smallest firm had 21, whilst there was a mean of 111 shareholders. The second largest firm in terms of paid-up capital was the Nowgong Tea Co Assam Ltd. which had £72,630 and 280 shareholders. Alternatively the Jorehaut Co. had a paid-up capital of £66,000, placing it third in rank for capital, but only 23 shareholders.

As the total number of joint-stock firms continued to grow after 1865, the distribution and capital intensity changed. The expansion of the number of joint-stock firms in both the banking and tea sectors after 1866 was accompanied by a significant decline in the average capital per firm. Rungta proposed that the adoption of the joint-stock form was a response to demand for capital in certain sectors, starting with banking and insurance firms, then, as trade increased, transportation and related sectors, and finally railways and industrial enterprise.[484]

The analysis of capital intensity supports some of this demand-side explanation; industries such as banking and jute mills had high capital intensity and the joint-stock form was utilised to deepen capital reserves beyond the scope of the partnerships. Yet, sectors like tea and transportation were relatively low in capital intensity but also attracted large levels of investment. This indicates a supply-side explanation driven by investors, particularly in Britain, seeking profitable investments in growing industries. The joint-stock form was, in these cases, a better conduit for a diverse set of investors to channel their investments.

Changes in the number of firm registrations and levels of capital per sector, before and after 1865, show that investment patterns could change. The swing in the supply of capital, predominantly from Britain, occurred as the incentives for investment shifted with the growing demand for certain products like tea and cotton. Meanwhile demand for capital in India also shifted as changes in technology and processes affected the capital requirements in different industries, such as jute and railways.[485] These developments shaped the market for capital and explain the changing distribution of joint-stock firms.

In the case of the tea sector, the proliferation of the joint-stock form could be explained by both supply and demand factors. The high fixed costs in the start-up phase encouraged the use of the joint-stock to raise capital for these investments. On the other hand the positive trade-off between

[484] Rungta, *Business corporations in India*, 31.
[485] A plausible explanation for the decline in capital intensity in the tea sector in the 1870s was that the extensive investments in land clearances and infrastructure undertaken in the previous decade reduced the capital requirements for further investment in these areas.

the relatively low capital requirements per firm and possible profits encouraged investors to use the joint-stock form to channel their capital to India.

6.7 The rise of the managing agents

As the number of joint-stock firms grew throughout the 1850s and 1860s the importance and scope of the managing agents also accelerated. The registers support the claims of Kling and Rungta that the form was important long before 1870. The 1831 Calcutta register listed 19 insurance companies dealing with marine, river and fire insurance of which 18 had a secretary listed as an agency house, indicative that the insurance firms were either promoted or managed by the agency houses.[486] However, it wasn't until 1858 that the registers delineated the trading firms that acted as agents.

In the register of 1858, 28 were firms recorded as acting as an agent. Figure 25 shows that within ten years the number of managing agents had more than doubled to 62, or 37 per cent of the total number of trading firms in the 1868 list. The number of firms represented by them had come close to quadrupling, with 183 firms using agents. Firms represented by agents were predominantly based in Britain or India, although relationships between firms in Europe and the United States were also recorded. This form of relationship and organisation of activities between firms became increasingly widespread in Calcutta.

[486] Rungta, *Business corporations in India*, found that the articles of association for the insurance firms in Calcutta contained similar features to those later used by the managing agents, with the 'secretaries' able to exert extensive control over activities in Calcutta.

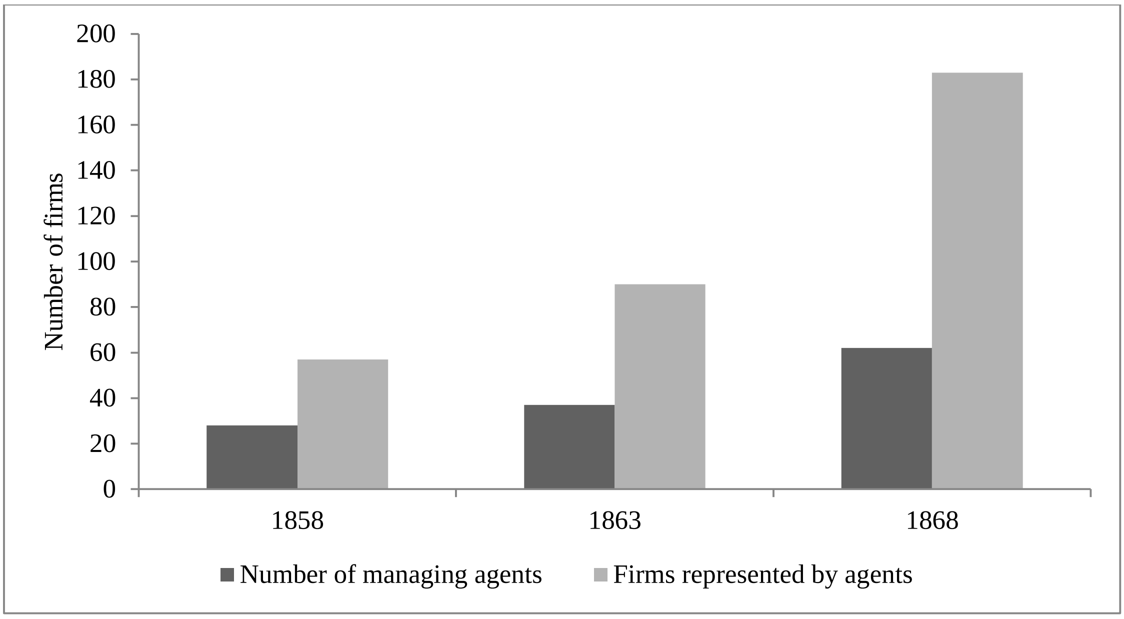

Figure 25. The number of managing agents and the firms they represented, 1858 to 1868.
Source: BL Bengal Annual Registers, 1858, 1863, 1868.

As both the number of managing agents and the number of firms represented by them increased, the registers indicated two significant changes to the scale of the firms. Table 16 bands the number of firms represented by each agent: a single firm, two to three, four to six, seven to nine, and ten or more. This shows a trend for managing agent to have contracts with an increasing number of firms. In 1858, 57 per cent of managing agents acted for only a single firm. This figure dropped to 42 per cent by 1868, whereas 25 per cent of the agencies represented four or more firms in that year. The mean average of firms per agent increased from 2 to 2.98. Indeed the number of managing agencies that represented more than seven firms increased from only 3.5 per cent in 1858 to nearly 13 per cent by 1868. In that year the eight largest managing agencies represented 74 firms between them, with one agency, Borradaile, Schiller and Co., representing 20 firms.

Table 16. The number of firms represented by each managing agent in bands, 1858 to 1868

	1 (%)	2 to 3 (%)	4 to 6 (%)	7 to 9 (%)	10+ (%)
1858	57	25	14	4	0
1863	46	32	14	8	0
1868	42	32	13	11	2

Source: BL Bengal Annual Registers, 1858, 1863, 1868.
Notes: The number of firms represented by each managing agent was aggregated into bands of 1, 2 to 3, 4 to 6, 7 to 9, and 10 or more. The number of firms in each band is expressed as a percentage.

The increase in the number of firms represented by each agent was accompanied by an increase in the size of the managing agencies in terms of their managerial capacity, as shown in table 17. There was a small increase in the mean average managerial capacity from 5.15 to 5.40 managers per firm, but the size of the largest firm increased from 12 to 16 managers. The coefficient of variation showed that, as with the trading partnerships, variability in the size by managerial capacity of the firms increased, with some seeking to achieve greater scale of operations. Conversely, volatility declined for the number of firms represented.

Table 17. Managing agents summary statistics

Year	Mean number of firms managed	Firms managed coef. of variation	Sole proprietor agents	Highest number of firms managed	Mgmt. capacity high and low	Mgmt. capacity mean average	Mgmt. capacity coef. of variation
1858	2	0.83	7.14%	8	12/1	5.15	0.58
1863	2.46	0.76	10.81%	7	13/1	5.35	0.61
1868	2.96	0.56	17.74%	20	16/1	5.40	0.71

Sources: BL Bengal Annual Registers, 1858, 1863, 1868.

The range in size and diversity of the managing agencies in 1868 is well demonstrated by a firm like Mackinnon, Mackenzie and Co., which had four partners and 12 assistants on its staff. They acted as agents for the British India Steam Navigation Company Ltd., Delhi Railway, Ramghur Tea Company Ltd., Universal Marine Insurance Company Ltd., Queen Fire Insurance Company, Glasgow Jute Company Ltd., India Jute Company Ltd., and were secretaries to Howrah Docking Company Ltd. Conversely, Henderson and Co., with one partner and two assistants, acted solely as agents for the Sun Fire Insurance Office. Indeed the percentage of managing agents organised with only one partner or as sole-proprietors increased from 7 per cent to 17 per cent. There was, though, no clear trend in the relationship between the size of the firm and the scale of agency activity.

The long established pattern for agents to act for insurance companies continued throughout the period. However, as shown in table 18, the number of insurance companies as a proportion of the total population of firms represented by agents declined; falling from 61 per cent to 34 per cent. Conversely, the number of tea firms linked to managing agents increased significantly. In 1863 five of the 12 tea firms were listed as having agents, whilst of the 70 tea firms listed in 1868, 46 were recorded having a firm act as agent or secretary.

Table 18. Sectors in which the firms represented by managing agents were located, 1858 to 1868

	Insurance (%)	Banking (%)	Industrial (%)	Tea (%)	Transport (%)	Mining (%)	Trade (%)	Gvmt. (%)
1858	61	4	9	2	11	11	4	0
1863	54	1	8	8	12	6	9	2
1868	34	2	9	26	9	1	15	4

Sources: BL Bengal Annual Registers, 1858, 1863, 1868.
Notes: The number of firms represented by each managing agent was classified by industry, and each industry was expressed as a percentage of the total number of firms managed by agents.

The trend in the tea sector towards a widespread adoption of the managing agency form confirms Chapman's findings. Identifying 15 joint-stock tea firms launched between 1839 and 1875, he found that 11 of these firms were managed by an agent by 1900. He also found that of the largest (£100,000+ Capital) sterling tea companies in India, by 1899, all had managing agents in place.[487] This was a notable trend amongst the larger tea firms in 1868. Of the 22 tea firms with nominal capital above £100,000, 18 had agents, whereas of the 21 firms with nominal capital of £50,000 or less only eight had agents.[488]

[487] Chapman, "British Free-Standing Companies."
[488] BL Bengal Annual Register and Directory, 1868.

Trends in two other sectors are also worth noting. The proportion of industrial manufacturing firms using agents remained at roughly eight per cent of the total firm population. These were predominantly firms operating mills, producing iron, and manufacturers of silk, indigo, and cotton. The proportion of firms in transportation and related infrastructure declined slightly but still remained close to nine per cent. These were industries, which, along with tea, were sectors where the joint-stock form was widely used. Indeed it was noticeable that the managing agents were increasingly closely associated with firms organised as joint-stock. As shown in figure 26, the number of joint-stock firms utilising agents increased over the course of the decade, increasing from 30 per cent to 42 per cent of all joint-stock firms by 1868.

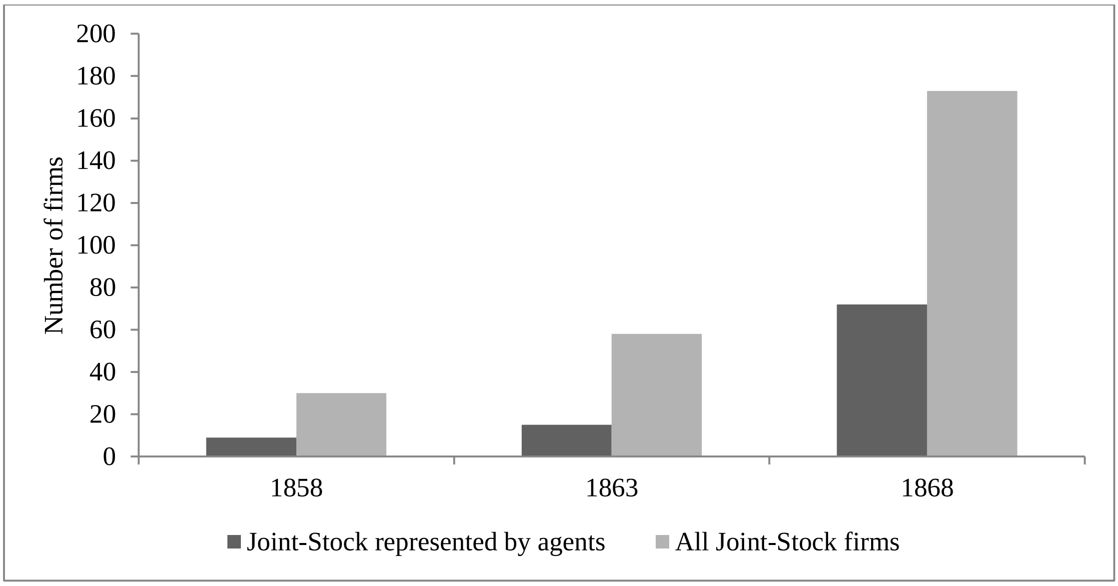

Figure 26. The number of joint-stock firms with agents and all joint-stock firms, 1858 to 1868. Source: BL Bengal Annual Registers, 1858, 1863, 1868.

Finally, firms in the area of trade grew from 3.5 per cent to nearly 15 per cent of the population of firms managed by agents. These relationships were predominantly between merchant firms in India and manufacturers in Britain. For example Corfield J and Co. acted as agents for Collis Browne's Chlorodyne, Calvert and Co.'s Carbolic Acid, Moor's Medicated Plaisters, Pogsons Bael Powder, and Freemans Chlorodyne.[489]

[489] BL Bengal Annual Registers, 1868.

Lokanathan proposed that the managing agents fulfilled two main functions; the management of other companies and the promotion of joint-stock ventures. However, the data on agents in the registers does not define the activities undertaken by them. Agency activity in areas including insurance, shipping, and trade often focused on managing point-of-sale activities and building the market for products rather than offering managerial services. However, in industries like tea and manufacturing it is likely that the agents were providing some form of management service. Although the registers reveal over 60 firms acting as agents, the number of those fulfilling the functions of a managing agency was almost certainly lower.[490]

The extent to which the promotion of firms was undertaken by the agents is also difficult to assess. In the tea industry there appear to be both joint-stock firms that appointed agents after they had been operational for some time, such as the Assam Co. and Jorehaut Co. Yet, many listed in the 1860s appear with an agent attached to them from their inception. It appears that the agents acted both as promoters as well as managers in the tea sector.

6.8 The pressures of capital and competition

The emergence of new industries, such as tea and jute, in the years after 1850 offered opportunities for entrepreneurs and investors to diversify their activities. However, the nascent tea industry had distinct challenges: the complications caused by the distance from Calcutta and difficulties of the environment both affected the organisation of activities and increased capital requirements to fund investments in infrastructure. Analysis of the transactions undertaken by firms in the tea sector reveals the importance of managing the production process to improve quality and control prices. The structure of the industry encouraged the full integration of activities.

The legislative changes in 1850 lowered the costs and improved the benefits of incorporation and in the tea sector entrepreneurs widely adopted the joint-stock form. Historical explanations

[490] Rungta, *Business corporations in India*, identified 31 managing agents managing 90 listed companies in 1875.

have tended to explain the form's proliferation due to increasing demand for capital and diversification of risk and the data from the registers showed that the increase and distribution of joint-stock firms can be explained by change in the demand for capital. However, the data also showed that the form proliferated in areas with fairly low or declining capital intensity, like tea in the 1860s. This was also a period when the number of firms in the sector increased dramatically. This suggests that the form may have predominantly been used to facilitate speculative activities.

Yet, as the joint-stock form proliferated, a similar trend occurred in the number of managing agents. The registers showed the number of agents and the number of firms employing them increased, and that the form was well-established by the 1860s. This raises various questions: What factors encouraged the adoption of the joint-stock, and how successfully did it overcome the challenges of the new industry; and perhaps most important why, despite having embraced a notionally superior form of business organisation, did the owners of many of these joint-stock firms relinquish control to the managing agents? Of particular interest is to examine more fully the role played by the managing agents with the firms they managed in the tea sector, and consider what challenges the managing agents were responding to. This is done through the case of the Assam Co. and Gillanders and Co.

Chapter 7 Building a new industry: The Assam Company.

7.1 Introduction

The commitment of the EIC and British governments to break the Chinese monopoly on tea and develop a viable industry in India was a significant incentive to entrepreneurs in Calcutta and Britain. The Assam Co. was founded to take advantage of the opportunities created by the government's experiments in establishing tea gardens. Drawing on the extensive records created through incorporation and AGM reports, the chapter considers how the owners established not only the firm but the nascent tea industry in Assam.

The firm faced various challenges: Limited infrastructure and distance between Assam and Calcutta, a lack of knowledge and experience of tea production, and later, as the industry expanded, increasing competition. The chapter finds that in response to these challenges the network of trading firms and factory owners was replaced with an integrated entity that oversaw both production and marketing functions. The analysis considers increasing capital intensity and control over production as factors that encouraged this development.

The chapter concludes that the need for capital to fund the investment in infrastructure, and the subsequent increase in asset specificity of the transactions for tea, encouraged the widespread adoption of the joint-stock form and integration of activities. However, the separation of owners and managers increased opportunistic behaviour that the incentives and enforcement mechanisms within the corporation were unable to solve. The financial performance was mixed, suffering significant losses for a number of years, resulting in the hiring of a managing agent which returned the firm to profit. The difficulty in mitigating agency costs provides a different interpretation to explain the limited proliferation of the joint-stock form in India.

7.2 The foundation of a company

In 1834 the EIC sponsored a scientific deputation to visit Assam and report on the possibilities of commercial tea production.[491] This resulted in the establishment of a number of experimental tea gardens. The results were promising and in 1839 Charles Bruce, the superintendent of the gardens, produced estimates of costs and revenues showing that the gardens would achieve a profit margin of 65 per cent, directly scalable as the size of the gardens increased.[492] Tea production appeared to be a highly attractive investment opportunity.

The government tea gardens were founded with the intent of handing them over to private interests to grow the nascent industry. Although breaking the Chinese monopoly was regarded as a strategy of national importance there was a growing belief that entrepreneurs rather than the state should exploit these possibilities.[493] In London, various merchants linked to the East Asian trade and tea importers came together to investigate the possibility of taking over the gardens.[494] At their first meeting the group concluded that "it only requires the application of European capital and enterprise to render it [tea] a great source of profit and an object of great national importance."[495]

The group moved rapidly to capitalise on the opportunity and in January 1840 formed a society formalised through a Deed of Association.[496] The aim of the company was, "to manufacture and dispose of the tea the growth thereof, and generally to carry on the business of cultivating the

---

[491] Antrobus, *the Assam Company,* 16.
[492] Ibid, appendix three. Report on the manufacture of tea, and on the extent and produce of the tea plantations in Assam, by C.A.Bruce, Superintendent of tea culture, in the transactions of the agricultural and horticultural society of India, 14th August 1839. Bruce, regarded as the foremost expert on tea in India, estimated revenues of Rs. 35,554, and profits of Rs. 23,267. Although he did not calculate a profit margin, he did show that profits would be directly scalable to the area of cultivation.
[493] Griffiths, *History of the Indian tea industry,* 45.
[494] These included Richard Twinning of Twinnings tea merchants, one of the largest tea importers and retailers in Britain, George Larpent the senior partner at Cockerell and Co., and Ross Donnelly Mangles, an MP with significant trade interests in India. All had significant interests and knowledge of tea and India.
[495] Antrobus, *the Assam Company*, 27, reprint of the Assam Company's first London minute book 12th February 1839.
[496] LMA MA08796, the original indenture made between the founders of the firm in 1840. A Society was similar to a partnership, utilising a deed to stipulate the purpose and governance of the venture.

tea plant, and manufacturing or preparing the same for sale and exportation."[497] To successfully prosecute these aims the members believed that the opportunity "may be advantageously prosecuted on a scale beyond the resources and enterprise of individual capitalists."[498] Instead, they planned to incorporate the firm with nominal capital of £500,000 raised from 10,000 shares. Of these shares 8,000 were allotted to British investors and 2,000 to subscribers in India.[499]

A similar group of merchants in Calcutta also enquired with the EIC government about taking over the experimental tea gardens.[500] However, the embryonic state of the industry and capital requirements for expanding the gardens encouraged the integration of the groups into a single venture.[501] The firm offered shares for subscription and by 1840 over 300 shareholders had purchased 7,777 shares in London, with the remaining shares taken up in India. The average number of shares per investor was 23.70, with a range from 300 to 1. There were eight shareholders who owned 100 or more shares, and they held 1130 shares or 15 per cent of the total issue.[502] A deposit of £5 and a first call of £7 per share raised £125,000 of paid-up capital.[503] This encouraged the EIC government to hand over the majority, although not all, of the gardens on a rent free basis for ten years. The firm also applied to the government of India for an act of incorporation.

The agreement reached between the two groups included the constitution of two boards, one in Calcutta and one in London. The organisation and governance of the dual boards was set down in a Memorandum of Association. They were formed by election from the body of shareholders,

[497] LMA MA08796, Original Act XIX of 30th August 1845 for incorporating the Assam Company.
[498] Ibid.
[499] Ibid.
[500] LMA MS27047, Calcutta AGM report 1840, showed the Bengal Tea Association was comprised of both European merchants such as William Prinsep, and leading Indian merchants and bankers including Dwarkanath Tagore and Rustomjee Cowarjie, both partners in large Calcutta trading firms.
[501] Antrobus, *the Assam Company*, 40, suggested that the group in Calcutta submitted the request first and was probably best placed to negotiate with the government to receive the gardens, but understood the London group was better placed to raise capital in the London markets and were happy to form a joint venture.
[502] LMA MS08794, List of London shareholders 22nd Oct 1840. In terms of contemporary British joint-stock firms the Assam Co. was medium sized. Acheson, Graeme, et al, "Corporate ownership and control in Victorian Britain," estimate that between 1853 and 1868 the mean size of paid-up capital in British joint-stock firms was £154,100, with a mean of 312 shareholders, across all sectors excluding banks.
[503] Antrobus, *the Assam Company*, 43.

the only stipulation being that a director needed to hold a minimum of 25 shares.[504] The power of the boards was significant, with the directors empowered, "to do and execute all acts deeds and things necessary or deemed by them proper or expedient for carrying on the concerns and business of the society." Indeed, to ensure control, "no shareholder except a director, trustee or auditor to have access to the books or to interfere with management."[505] Meeting a minimum of once a month, the members of the board were deeply involved in the decision making of the firm.

The individual shareholders could exert some control over the directors via an Annual General Meeting (AGM). An annual report including a balance sheet and financial and production projections was distributed. Major policy decisions were also discussed and voted on, using a gradated voting system.[506] The directors were also constrained by various protocols in the Memorandum related to investment and financing.[507] The level of nominal capital was limited and, should it be raised, the original shareholders could buy the new shares in proportion to their existing stake and not have their holdings diluted.[508] Efforts were also made to limit the liability of the shareholder to the amount they subscribed for, to the extent that it "was lawful and practicable."[509]

7.2.1 Establishing the operations in India

A central component of the agreement that formed the coalition was "that the local management and direction be left entirely with the committee who will govern the proceedings here [Calcutta]."[510] This was done through a board in Calcutta, similarly organised to the one in

---

504 LMA MA08796, the original indenture of 1840.
505 Ibid.
506 Ibid. Shareholders with 5 to 19 shares had one vote, 20 to 49 had two votes, 50 to 99 three votes and over 100 four votes The system had been used to organise the voting rights of shareholders in the EIC and was adopted by many companies in the 19th century.
507 LMA MA08796, the original indenture of 1840, included clauses that prevented the raising of debt beyond certain agreed levels.
508 LMA MA08796, Original Act XIX of 30th August 1845 for incorporating the Assam Company.
509 LMA MA08796, the original indenture of 1840. This was an attempt to limit the exposure of shareholders to the value of their investment, prior to the legal availability of limited liability in 1855.
510 Antrobus, *the Assam Company*, 40.

London, with an elected directorate and annual AGM.[511] The aim was to overcome the problems of decision making at distance, with the Calcutta board overseeing activity in India and protecting the interests of the London shareholders.

However, the exact powers and capacity for decision making of the Calcutta board was unclear. The amended deed of settlement stated that decisions had to be undertaken, "provided always that they shall in all respects conform to these presents and any rules or regulations duly made by a general (London) meeting."[512] The lack of clarity in defining the role and scope of the local board was to have far reaching consequences for the company.

The company raised capital in both Calcutta and London which enabled work to begin in earnest. This capital was used to hire three superintendents who were sent to Assam to scout for favourable positions for cultivation and to set up factories.[513] Each superintendent was put in charge of a geographical division, and a managerial hierarchy was created as European assistants were hired.

The directors initially tried to develop a ryoti system similar to that used in indigo and other plantation crops, seeking a local workforce to undertake the cultivation and harvesting of the trees.[514] The payment of a salary and a fixed price for leaves by weight to local chiefs would enable the company to "save the expense of establishment."[515] This system failed to achieve widespread adoption as the indigenous population of Assam was simply too small to fulfil the rapidly growing labour demands, and much of the local population was not interested in wage labour.[516] Instead, coolie labour was imported to undertake the land clearance and construction of the gardens, then the cultivation of the trees. The company also dispatched agents to recruit

---

[511] LMA MA08796, Original Act XIX of 30th August 1845 for incorporating the Assam Company. There were two AGMs a year in Calcutta and a gradated voting system also applied.
[512] LMA MA08796, the original indenture of 1840.
[513] Northern, Eastern and Southern divisions were established. Charles Bruce was hired as one of the superintendents when his contract with the EIC expired.
[514] Antrobus, *the Assam Company*, 35. "The country is reputed as being thinly populated, but no doubt is entertained as to the possibility of obtaining adequate labour, the price of which is extremely low, and process of tea manufacture is considered to be peculiarly suited to the peaceful habits of the Assamese."
[515] LMA MS27047, Reports of the local board in Calcutta 1840.
[516] Griffiths, *History of Indian tea*, 267.

Chinese workers with knowledge of tea production and nearly 500 were recruited and shipped to Calcutta in 1840.[517]

The power invested in the superintendents was significant. They dictated policy in the gardens and controlled the flow of information back to Calcutta and subsequently to London. It was from their reports, letters, and accounts that the performance of the company was analysed. Knowledge and experience of tea production was extremely limited, and data was urgently required by the directors to give them insights into the processes and performance. The reports of the superintendents formed the backbone of the early AGM reports in both Calcutta and London. Drawn verbatim from their letters the AGM reports detailed the progress in each division and predictions of future production and performance.[518]

After production the crop was exported directly to Britain via Calcutta, where brokers were used to manage the sale at auction. The Assam Co. worked with the London broker, J.Thompson and Co., throughout the whole period.[519] The broker managed the consignments once they were shipped but most importantly acted as arbiters of quality, responsible for grading the tea, setting prices and communicating this information to the market.

Alongside the cost of land clearances and the construction of factories, investments in large pieces of equipment were also made. These included a steam powered saw mill used to produce the boxes for packing the tea. The report in 1840 noted that, "one of the greatest difficulties and sources of heaviest expenditure has been the means of transport to upper Assam."[520] To overcome this problem boats were constructed locally but they also contracted to build a steam

[517] LMA MS27047, Reports of the local board in Calcutta 1840. The workers were mainly hired in Pennang and Singapore rather than the Chinese mainland.
[518] LMA MS27047, Reports of the local board in Calcutta, 1840 and 1841. The superintendents discussed conditions in the regions, the amount of land cleared, the development of the infrastructure, and likely productivity and costs.
[519] Various documents charting the relationship between the Assam Co. and Thompson and Co. survive. LMA MS09936, Account of sales, Thompson and Co September 1856. These accounts listed each shipment of tea received by Thompson and Co. on behalf of the Assam Co., as well as the type, quantity and price achieved. LMA MS8803/1 Flyer for the sale of the Assam tea at the London Commercial tea rooms by the Agents W. Thompson June 9th 1863.
[520] LMA MS27047, Reports of the local board in Calcutta 1840.

boat that could work on the river all year. Like the saw mill this was to be built and shipped from England.[521]

In the first six months of operation the company spent Rs. 149, 978 (£15,000).[522] The result was the production of 10,202 lbs of tea in 1840 that was shipped to London for sale. Optimism abounded in both the AGM reports of the Calcutta and London boards. A dramatic increase in production was predicted, the report claiming that output would surpass 100,000 lbs in 1844 and by 1847 would reach 569,226 lbs.[523]

Analysis of the expenditure in the first years of operation found that 35 per cent could be classified as fixed capital investments in the development of the land and infrastructure in Assam and expenditure on large pieces of equipment. Circulating credit, such as the annual outlay on cultivation, harvesting and the management of operations, accounted for 43 per cent of the budget. The other 22 per cent was spent on coolie labour.[524]

7.2.2 Rising costs and managerial problems

The following year nearly 16,000 lbs was produced, and for the first time an auction of tea was held in Calcutta. The arrival of the steam boat and the saw mill from Britain, alongside further clearances in Assam, seemed to confirm the steady progress of the company in establishing robust operations in India. Various problems, however, were already emerging in both Assam and Calcutta.

Expenditure on both the gardens and infrastructure rose rapidly. In 1840 the total expenditure of the firm was around Rs. 420,000 (£40,000). This was a four-fold increase on the previous half

---

521 Ibid. This proved an expensive mistake, with both the steam boat and saw mill costly to procure and maintain, whilst being under-utilised.
522 Ibid.
523 LMA MS27047, Reports of the local board in Calcutta 1842. Antrobus, *the Assam Company*, 407. In reality production reached 181,614 lbs in 1844 but had subsided to 160,334 lbs in 1847. Production in excess of 500,000 lbs was finally achieved in 1855.
524 LMA MS27047, Reports of the local board in Calcutta 1841. The variable and labour costs were calculated on an annual or seasonal basis with wages paid monthly. These expenses were expected to be covered from the annual revenues.

year and amounted to nearly half of the firm's paid-up capital to that date. The costs of management and cultivation leapt from Rs. 57,921 (£5,700) to Rs. 235,207 (£23,000). The doubling of annual expenditure had only increased production by 37 per cent, whilst fixed costs and items such as salaries had increased sharply with over 20 assistants employed alongside the three superintendents.[525] Indeed, from 1840 to 1845, despite spending Rs. 699,430 (£70,000) or over half the paid-up capital, production fell short and costs overran the projections each year, whilst the quality of the tea failed to improve.[526]

The limited supply and quality of labour was becoming an issue. The need to import coolie labour from outside the region, as well as Chinese artisans, had added significantly to the variable costs. Unfortunately the experiment with Chinese workers was of limited value and in a sign of things to come 652 coolies dispatched to Assam all died from Cholera.[527] The company not only lost the up-front hiring costs but also suffered labour shortages in the gardens leading to a decline in production. The harsh conditions in Assam had also resulted in a steady litany of deaths and illnesses amongst the European managers that affected the management of the operations. In particular, there was concern over disruption to the accounts and reporting system.[528]

By 1843 the accounts were in arrears by up to ten months when they reached Calcutta. By the time information reached London the directors claimed that "these data have since been altered by the parties who supplied them, in many material respects."[529] The rising costs provoked concern in London where there was an increasing sense of disconnection and ignorance of the situation on the ground, possibly caused by the purposeful obfuscation of the data in India.[530]

525 Antrobus, *the Assam Company*, 422.
526 Ibid, 50.
527 LMA MS27047, Reports of the local board in Calcutta 1841. The majority were shipped back to China at a cost of Rs. 29,365
528 Ibid.
529 Antrobus, *the Assam Company*, 52-53, reprint of the London circular to shareholders 1844.
530 Ibid.

The increasing costs were expected in these early years, but these were supposed to be offset by increases in production and revenues projected by Bruce and the Calcutta board. This raised expectations amongst shareholders that returns should be significant and imminent, whilst in reality revenues remained insignificant. To manage shareholder expectations a dividend of 3 per cent was offered in 1843, which equated to a £2,585 pay-out on revenues of £3,599.[531] When seen against the spiralling costs this policy appeared misguided in the extreme with the dividend effectively coming out of capital.

The failure to obtain adequate information on the situation in Assam caused directors and shareholders alike to start panicking. The 1844 the London AGM was postponed, and in Calcutta six of the nine directors resigned their positions and sold their shares.[532] The poor outlook, along with the failure to obtain the charter for incorporation and limited liability, led many to conclude that further investment was worthless. Of 7,563 shares issued in London, 1,024 shares failed to pay up a £4 call.[533] By the end of 1844 the company was left with the capital raised from the new call and revenues from tea sales to fund all activities in 1845.

It was clear that neither of the boards had the information or knowledge to make critical decisions to turn this situation around. Information had become a critical input for the company, as both boards sought to ascertain the real extent of the issues in Assam.[534] The London board created a special committee to investigate the position of the company which claimed "that the data furnished by the Calcutta direction are of so imperfect and contradictory a nature, and the details of accounts so unsatisfactory they are unable to come to such a conclusion upon the questions referred to them."[535]

[531] LMA MS27052, a table listing all dividends was inserted at the front of the collection of AGM reports. Antrobus, *the Assam Company*, 49.
[532] Antrobus, *the Assam Company*, 52-53, reprint of the London circular to shareholders 1844.
[533] Ibid, 59.
[534] Ibid, 66.
[535] Ibid, 68.

In 1847 they notified the Calcutta board that they would provide no money for the year and the local board would have to be totally self-sufficient.[536] From London the very future of the company looked questionable, and in 1847 the directors discussed selling the company or wrapping it up. Such was the disinterest in London that the AGM of 1847 was dissolved when no shareholders turned up for the meeting.[537]

7.3 Reforms, reorganisation and growth

The special committee, however, recommended that the firm need not be dissolved.[538] They placed the blame for the poor situation squarely on incompetent, even fraudulent, management in Assam and the poor oversight provided by the Calcutta board.[539] These problems could be solved by rationalising the areas under cultivation to improve efficiency, and by replacing the Calcutta board with an agent based in Calcutta but reporting directly to the board in London. This would improve the flow of information and allow the London board to exert direct control over operations, resolving the problems of decision rights.[540] These proposals were communicated to the Calcutta board who were asked to renounce their roles and step down.

The Calcutta Board vigorously rejected the proposal. The directors noted that the company was incorporated in India, and therefore was legally required to have a board and AGM meeting in Calcutta, providing solid legal ground for them to rebuff the London board.[541] They also believed that local expertise and oversight was crucial to turning round the firm.[542] Tacit acceptance of their failure to identify and oversee the right managers saw all three superintendents removed, and a single new superintendent was appointed. They also obtained detailed analysis of the

[536] Ibid. The local board set out to raise cash through the sale of the steam tug and the saw-mill. The sale of the steamboat realised Rs. 70,000 (£7,000) and the saw mill a further Rs. 3,000 (£300).
[537] LMA MS27052, London board AGM report 1847.
[538] LMA MS27052, report of the Special Committee was reprinted for shareholders in February 1847.
[539] Antrobus, *the Assam Company*, 69.
[540] LMA MS27052, London board AGM report 1846.
[541] Antrobus, *the Assam Company*, 74 -77. Incorporation had finally been granted in 1845.
[542] Ibid, 73, reprinted reply by Calcutta Board, 28th April 1847.

different districts, gardens and factories, which allowed for a clear strategy to be developed regarding future cultivation.

The report focused on a more nuanced system of accounting for costs, linking the impact of large fixed costs incurred in expanding cultivation on final profitability, and the need to control production and expansion at an efficient and effective rate.[543] This analysis provided a clear rationale for determining which gardens to retain and which to close. The report confirmed the importance of the Calcutta board as a conduit for local knowledge and experience through which the firm could shape strategy and make local decisions.

In Calcutta, the board appointed a fulltime salaried secretary and managing director to liaise with the new superintendent in Assam. These changes refined the reporting structure; the single superintendent now reported to the secretary who reported to the managing director, who finally reported to the Boards. The aim was to provide greater control over the superintendent and improve the flow of information between the parties. These changes ensured that the Calcutta board was still the key point of coordination in the firm. They also gave the superintendent increased responsibility over all the operations in Assam.

Reforms were also implemented in the gardens to improve productivity and efficiency. The method of cultivation, initially modelled on the Chinese style, proved unsuitable in Assam due to different growing conditions. The system was changed to extend the plucking season which allowed for greater quantity and, potentially, better quality leaves to be plucked. The loose tea was now boxed and packed in Assam which provided better protection in transit and generally improved the quality of the tea. It also enabled the managers in Calcutta to ascertain the quality and quantity produced at the level of individual gardens and estates. This significantly improved their ability to disaggregate the assessment of performance.

[543] Ibid, 72. "I think the calculations should be taken on the whole of the lands, of course keeping in view prospective expectations. If every poorah of land, which does not yield a profit, was to be abandoned, many distinct patches in our most productive factories would be given up, and a further decrease in the crops effected."

Improvements were also made in the collation and reporting of information relating to production. In 1854 the superintendent's reports began using metrics of output per acre in pounds, linked to a cost of production per pound.[544] The output per acre metric was used to develop benchmarks, predict production and measure the performance of managers.

Previous efforts to account for costs, such as Bruce's, had tended to put all costs into a general overhead. The new reports sought to split fixed cost investments from the variable costs of production. This improved the precision of the calculations and enabled better control of the cost inputs. The importance of identifying changes in costs, relative to the area of cultivation and productivity, became central to the exchange of information between the managers and the board members.

The impact of the reforms was positive. The flirtation with disaster between 1845 and 1847, as the company lurched close to bankruptcy, had been turned around. Production more than tripled, from 250,000 lbs in 1850 to 870,633 lbs in 1860.[545] Costs had increased, more than doubling, but were accounted for in a more nuanced manner and subsequently controlled more effectively. Revenues and profits were steadily increasing, and subsequently the dividends to the shareholders were raised from 2.5 per cent in 1852 to 12 per cent in 1860, with disbursements every year.[546]

7.4 Competition, conflicts of interest and a crisis of management

The firm increased its acreage of planted tea most years, rising from 1,356 acres in 1840 to 5,145 acres in 1870.[547] The increase in acreage and improvements to productivity saw 1 million lbs of production exceeded in 1862. The improved performance encouraged entrepreneurs to exploit opportunities to further extend production, as Assam tea became increasingly established in the London market. The government's relaxation of the regulations governing access to land in

[544] Antrobus, *the Assam Company*, reprinted the report of 16th February 1854 in appendix 5.
[545] Antrobus, *the Assam Company*, 407–410.
[546] LMA MS27052, a table listing all dividends.
[547] Griffiths, *History of India Tea*, 407–410.

Assam had also encouraged increased speculation in land for tea cultivation. The sector expanded dramatically with around 70 joint-stock firms and numerous other private ventures established in Assam by 1868.

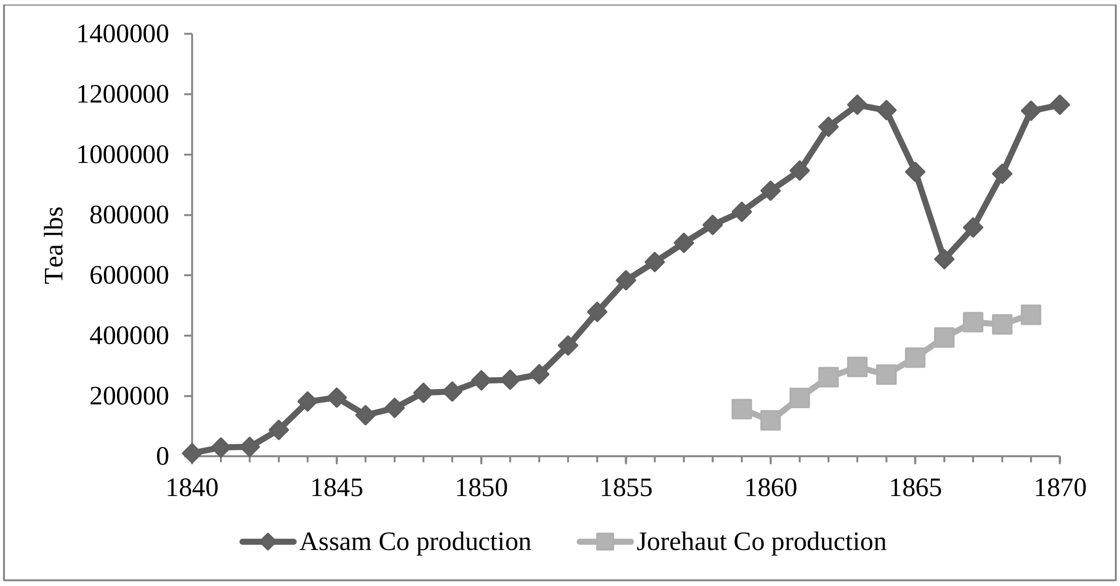

Figure 27. Comparison of the Assam Co. and Jorehaut Co. annual production, 1840 to 1870. Source: Antrobus, *the Assam Company*, 407–410, Antrobus, *the Jorehaut Company*, 47–48.

Yet, as figure 27 shows, in 1865 the Assam Co.'s increase in production ground to a halt as output declined to 942,877 lbs, and had halved to 653,211 lbs by 1866. This decline coincided with the bursting of the tea bubble. Many of the new owners had little experience of the sector and sought to increase productivity despite prices in London falling due to oversupply and declining quality.[548] The increase in competition and efforts to extend the land under cultivation put pressure on already scarce resources, particularly labour and credit.[549] Many firms were unable to deal with these shifts, and in 1865 there was much consolidation in the sector as numerous bankruptcies and mergers occurred.[550]

[548] Figure 21, p.180, shows that the effect of the tea boom and bust on the average price in London was significant. From 18 pence per lb in 1860, it rose to 24 pence in 1864, before collapsing back to 19 pence in 1865.
[549] Griffiths, *History of Indian Tea*, 74.
[550] Ibid, 99. Edward Money identified five factors that caused the bust, "Firstly, the lack of restraint on the part of the government in granting land; secondly, the shortage of labour and the expansion of the industry regardless of this factor; thirdly, the lack of experience regarding both cultivation and manufactures; fourthly, the resistance of many proprietors on quantity at the expense of quality; and,

Although the volatility in the wider sector may have impacted on the production capacity of the Assam Co., the slump was indicative of deep-seated problems of internal management. Indeed, senior directors placed the blame for this outcome on the management of the firm.[551] Comparison with the performance of its nearest rival gives further support to the view that it was a failure of management rather than effects of the environment. The Jorehaut Co., the next largest tea company in Assam, whilst facing the same environmental and market conditions continued to increase its production. The general trend of the industry at this time was one of increasing production.

One of the results of increasing competition was the rise in investment opportunities in other tea firms and an increase in demand for expertise. Many of the directors and managers in Calcutta held land in Assam on which they produced tea independent of the company or offered themselves as directors or advisors to other tea firms. This provoked disagreement amongst the directors with those in London claiming that "the manager of one tea company can scarcely with propriety be a director of another."[552] In Calcutta the feeling was, "Tea cultivation has not yet reached the stage where every additional plantation is a rival to the Assam Company with adverse and clashing interests nor can it do so for many years."[553]

These disagreements reopened the rift between the boards. Those in London saw the potential for corrupt individuals to divert resources or make decisions to the detriment of the company. These fears were given credence in 1862 when accusations of fraud were brought against two directors in Calcutta. Each had personal interests in other gardens and one was appointed as agent for the Jorehaut Co.; both were accused of diverting labour and resources including tea seeds and coolies from the Assam Co. to their own gardens, achieved through the falsification of accounts.[554] The solicitor of the London board threatened to indict them for conspiracy to

lastly, the food shortage and the burden on proprietors of supplying rice and other foodstuffs at concession rates far below actual costs."

551 Antrobus, *the Assam Company*, 123.

552 LMA MS9935, letter entitled Response by Mackay to the remarks by Burkinyoung, 23rd April 1862.

553 LMA MS9935, reprinted letters and statements from Mr Judge, Deputy Chairman of the local board at Calcutta 26th May 1862 regarding the conduct of Mackay and Carter.

554 Ibid.

defraud the company and used clauses in the Memorandum to remove them from the board, until the delinquent directors finally resigned.[555]

The conflicts of interest and misuse of resources was also prevalent amongst the managers in Assam. The superintendents, in particular, came in for extensive criticism. One shareholder claimed the superintendent, "has several gardens of his own in different places, contiguous to our gardens … his own personal interests are in direct opposition to the interests of the company."[556] There were subsequent claims that he had obtained good quality land for his own cultivation and diverted coolies and skilled labourers to work these lands rather than the company's.

Assistants also established personal interests close to the gardens they managed. The Calcutta board turned a blind eye to these practices partly due to the shortage of managers available. In effect, private interests had become a form of incentive to retain managers.[557] When their private interests developed sufficiently they would leave to work them fulltime. This exacerbated the poor performance in the gardens, as managers failed to devote time to their work, and when they left the costs of recruitment and replacing the expertise could be significant.

The fraudulent activity was enabled by a lack of monitoring and control over the reporting system. Correspondence should have been signed-off by multiple directors, and copies were supposed to be preserved to ensure transparency of communication between managers and directors, yet this system was easily manipulated as the complicit directors simply hid their correspondence with the managers in Assam.[558] It was also claimed that the data supplied by the

[555] LMA MS27070, copy of opinion of Mr James relating to the delinquent directors and their accomplices in India, 1862.
[556] LMA MS8803/1, Letter from "a large shareholder" (Theobald) to the Chairman (Kemshed), 10th Sept 1866.
[557] Antrobus, *the Assam Company*, 114. "To put it plainly, their employment by the Assam Company as assistants gave them the necessary subsistence in which to live in the province whilst they pursued the objects of their own enterprise."
[558] LMA MS9935, reprinted letters and statements from Mr Judge, Deputy Chairman of the local board at Calcutta 26th May 1862 regarding the conduct of Mackay and Carter.

superintendents was biased and poorly collated.[559] Antrobus noted this issue, pointing to the inconsistent and inaccurate reporting of prices where even basic figures such as the total output per annum differed between reports.[560] Problems in matching costs with revenues, due to the length of time it took from plucking to booking the sales in London, allowed the managers in Assam to further manipulate the accounts contributing to the misreporting of profits.

7.4.1 The problems of managing agents at distance

The weaknesses in the organisational structure and reporting systems contributed to a wide range of malfeasant behaviour and poor performance in Assam and Calcutta. The problems can broadly be divided into three areas; corrupt practices and self-interested decision making, a lack of ability and experience, and poor information and reporting. A range of initiatives to reform the governance and organisation were launched through the early 1860s.

Extensive efforts were made to recruit individuals with the right skills and behaviours. Assistants were hired from the stream of young British men who sought opportunities abroad to advance their careers.[561] Most though lacked experience of local conditions or tea cultivation and had to learn on the job.[562] Edward Money derided them as men "who not only did not know a tea plant from a cabbage, but who were equally ignorant of the commonest rules of agriculture."[563] To find men with experience of tea the company had to search in India amongst a small pool of talent. As the Indian tea industry expanded the competition to retain or acquire talented managers

[559] LMA MS8803/1, Letter from "a large shareholder." The firm employed accountants in London, but it appears it did not use external accountants in Calcutta, with the local board forwarding their own accounts to London.
[560] Antrobus, *the Assam Company*, 114. "It is difficult, however, to regard these prices as the true market value of a year's crop, for it was customary to quote them as net, excluding cost of lead lining, freight, marine and fire insurance and sales charges."
[561] LMA MS8803/1, Letter from James Easson June 6th 1865. Writing to the company in 1866, James Easson was 28 years old, and of 'robust constitution.' He wrote "applying to you in the hopes of procuring an appointment on the tea plantations of the Assam company in India… I have had considerable experience of practical gardening and agriculture."
[562] LMA MS8803/1, Letter from "a large shareholder."
[563] Griffiths, *history of Indian Tea*, 97.

increased. It was common to poach from other firms, offering managers larger salaries and other inducement to switch allegiances.[564]

In an attempt to better incentivise and control these newly hired managers the company increasingly used contracts to formally set out the terms of employment. A junior assistant was hired for a five year period. During which time he “shall devote his whole time and attention to the service of the said company.” He was not to take any other position of employment in the tea sector. In particular, owning lands or tea gardens in Assam was prohibited. Efforts to monitor the activity of staff were enhanced by demanding a monthly account of all monies received and disbursed. Misconduct, defined by various activities such as negligence or corresponding with a competitor, could lead to dismissal. Finally a bond was taken by the company to be kept if the contract was broken.[565]

The contracts revealed the firm’s efforts to control their agents, but they were only as useful to the extent to which they were enforceable. Several cases, in the High Court of Judicature at Fort William, Bengal, revealed that both the contracts and the memorandum of agreement were limited in terms of legal enforceability. Two cases of wrongful dismissal were brought against the Assam Co. by accountants working in Assam who had been sacked for misconduct and fraud.[566] The judge ruled that the burden of proof in supporting a charge of misconduct was not fulfilled. In one case he also ruled that memorandum agreements made privately within the company had no application in law.[567] The Assam Co. lost both cases and had to pay compensation.

[564] LMA MS8803/1, correspondence between Bainbridge and Fisher, 1867. This was a successful effort to poach a Mr Fisher to join as Superintendent, offering a salary of £1,500.
[565] LMA MS8803/1, Articles of agreement between James Easson and the Assam Company, undated but likely 1865. LMA MS8803/1 Memorandum of agreement between Walter Prideaux and Conrad Bergman 21st March 1864.
[566] LMA MS27070, Suit No. 279 of 1867 in the high court of judicature at Fort William in Bengal. Tremearne vs. The Assam Company. LMA MS27070, written report that discussed the case of Mr Keighly, and the actions of the local managers and directors in attempting to bring the charges against him.
[567] LMA MS27070, Suit No. 279 of 1867. “The act (Deed of Settlement) is not a public act. Private acts are treated merely as private assurances or in other words ordinary deeds relating to the subjects dealt with by them.”

The difficulties in enforcing the contracts lessened the effectiveness of deterrents such as dismissal and made incentives a more important component in aligning interests. The assistants and superintendents worked for an annual salary which was gradated upwards over the period of the contract.[568] The salaries for certain positions were increased. The superintendent's annual salary in 1840 was £360; in 1863 it was £500, rising to £1,500 in 1867. Specialists such as doctors, engineers and accountants also saw their salaries increase. Conversely, the salary for the lowest paid assistant in 1840 was listed as £120 per annum which had declined to £80 in 1863, although gradated to rise to £125.[569]

The Calcutta board also put in place a commission scheme in 1850. The scheme set aside a percentage of the annual profit, agreed each year by the directors, to be distributed amongst the managers. However, the difficulties in calculating profits affected the utility of the bonus as an incentive. The link between productivity and profit was blurred by the time it took to realise the revenues. In an effort to make the system more equitable 75 per cent of the commission was paid once the crop was dispatched, with the remaining 25 per cent negotiated when the revenues were booked.[570] Shareholders, though, were worried that the calculation of profit would favour management and incentivise them to expand the area under cultivation, lowering profits available for dividends.[571]

Further efforts to control the managers centred on the reform of the organisational and reporting structure in Assam and Calcutta. A lack of clarity in the role of the superintendents and assistants resulted in poor management and coordination of the processes in the gardens. One

[568] LMA MS8803/1, Articles of agreement between James Easson and the Assam Company, undated but likely 1865. He would receive £120 in the first year, £130 in the second year and £200 in the third.
[569] LMA MS27047, Reports of the local board in Calcutta 1840. Antrobus, *the Assam Company*, 425. The real wages for the superintendent are 1840 £343, 1863 £498, 1867 £1,299, and for the assistant 1840 £114, 1863 £80.
[570] LMA MS8803/1, reprinted letter from H.M.Kemshead Chairman of Assam Company to W.Theobald Calcutta, November 3rd 1866.
[571] LMA MS8803/1, Letter from "a large shareholder."

superintendent claimed these issues were so problematic that the majority of the harvested tea was worthless because of the poor management.[572]

One proposal was to reinforce the existing hierarchy and give more power to the superintendent in Assam.[573] Alternatively, there was a call for the position to be abolished. In its place an agent in Calcutta, overseen by an advisory committee, would undertake all the management in India. This would be accompanied by reform of the regulations under which the managers were employed, giving accountants and surveyors more power to monitor the gardens.[574] This was rejected on the basis that, "If there be one thing more certain than another, it is that for executive administration the instrumentality of an individual is far superior to that of a Board of Committee."[575] The board in London were adamant that the main decision makers should be in Assam, not Calcutta.[576]

Efforts were made to reform the reporting system between the different parties in India and improve the flows of information between them. An increasing level of correspondence was noticeable between the managers in Assam and the directors in Calcutta throughout the 1860s. These letters were now printed and bound, to be distributed to the boards in Calcutta and London, and stored for reference. Each letter was dated, numbered, and listed the sender and recipient with a brief synopsis of the content.[577] To curb malfeasant behaviour, and increase the capacity for monitoring, all correspondence was viewed by the board and noted in the minute book to curtail private communication.[578]

---

572 LMA MS8803/1, reprinted letter from Bainbridge to the chairman April 27th 1867.

573 Ibid.

574 LMA MS8803/1, Letter from "a large shareholder."

575 LMA MS8803/1, reprinted letter from H.M.Kemshead Chairman of Assam Company to W.Theobald Calcutta, November 3rd 1866.

576 LMA MS8803/1, correspondence between Bainbridge and Fisher, 1867. This position was clarified when the new superintendent's powers were outlined, "You will have the complete control of the companies affairs in India and you will be in direct communication with the Board in London, and responsible to them directly."

577 LMA MS08797, example of the synopsis of letters dispatched 20th February 1866, and example of the synopsis of letters received March 8th 1866.

578 LMA MS9935, reprinted letters and statements from Mr Judge, Deputy Chairman of the local board at Calcutta 26th May 1862 regarding the conduct of Mackay and Carter.

There were also attempts to improve the quality of the data that was shared. The accounts were now signed off by the superintendent in Assam and the accountant and secretary in Calcutta. The secretary in London, commenting on the accounts now received from India noted that "this document bore upon the face of it all the appearance of having been carefully compiled and unless we had the actual factory books before us, we could have had no better evidence of its genuineness."[579] This was a marked improvement on the previous years.

7.5 Volatile returns and radical reform

Further proposals were made to streamline the reporting and decision making system.[580] However, the question of ultimate authority and control was still, in the eyes of the London Board, unresolved. Again, the possibility of removing the Calcutta board and managing affairs directly through an agent was proposed. The board in Calcutta battled against the change highlighting the problems of building trust with a paid agency.[581] Finally, though, in 1864 two Special General Meetings overturned the powers of the Calcutta board

In 1865 incorporation in the UK was achieved and a new Memorandum of agreement drawn up. The fundamental change was the formal appointment of one board that had power over the key assets of the firm and was clearly delineated as the ultimate form of authority in the company.[582] By June 1866 the company had 228 shareholders, a decline from the 305 listed in 1840, listed in the London register. They accounted for 6,674 of the issued shares, with a further 2,404 shares still registered in India. The average number of shares per shareholder increased from 23 in 1840 to 29. There were still eight individuals who owned more than 100 shares, but these now

---

[579] LMA MS8803/1, reprinted letter from H.M.Kemshead Chairman of Assam Company to W.Theobald Calcutta, November 3rd 1866.

[580] LMA MS8803/1, reprinted letter from A. Peterson to the Directors, August 1863. Suggested professionalising the board, so they met weekly and were paid, whilst a general manager was appointed to superintend the company in India.

[581] LMA MS8803/1, reprinted letter from A. Peterson to the Directors, August 1863.

[582] LMA MS8796/1, a Bill for the Incorporation of the Assam Company, 1865.

accounted for around 19 per cent of all shares.[583] The shareholders in India continued to register their stock in Calcutta but now voted in the AGM in London.[584]

Despite the withdrawal of much legal and decision making power from India there was still the question of arranging the management structure. A member of the Calcutta board was offered the position of 'agent'. This arrangement proved unsatisfactory, and in 1867 the management of operations in Calcutta was put out to tender.[585] The managing agent Schoene, Kilburn and Co. was offered a one year contract at a fee of £2,500 per annum. This was renewed the following year, and although the annual fee was reduced to £2,000 they were offered As. 8 for every chest of tea they shipped for the Assam Co. and a quarter per cent on the sale of bills.

The London board had finally applied the broom it had so long sought to sweep clear the perceived mismanagement in Calcutta. In its place, a contracted managing agency oversaw the management of the flow of goods, funds, and resources between Assam, Calcutta and London. The London Board now had ultimate authority and control over the firm's activities with the agents and superintendents reporting directly to them.

The reforms of the 1840s had allowed the firm to overcome near bankruptcy in the years after launch to become a solidly profitable venture throughout the 1850s, shown in figure 28. This had allowed the firm to grow, increasing the area of land under cultivation. Indeed, property and assets were estimated to be worth over £1 million by the time of the reincorporation in 1865.[586] Metrics such as total production and price were on a general upward trend, and the quality of the tea was improving. The strong financial performance had enabled expansion and at times a healthy dividend to the investors. However, the decline in production caused by the managerial

[583] LMA MS8794, June 25th 1866 List of shareholders in the London register. The largest shareholders in 1866 controlled 19 rather than 15 per cent of all shares as in 1840, but this still remained a diverse body of shareholders.
[584] LMA MS8796/1, a Bill for the Incorporation of the Assam Company, 1865. "The company may establish at such place in India as they think fit an office for the registration of stock and mortgages of the company."
[585] LMA MS08797, the Chairman's letter to Agent June 11th 1866.
[586] LMA MS08797, article from the Weekly Chronicle June 17th 1865, giving notice of the Assam Company AGM.

failures of the early 1860s was accompanied by a dramatic fall in profitability. The extensive restructuring of the organisation through the reincorporation and appointment of the managing agent did though result in the firm returning to profit by 1868. The ROCE followed a similar volatile trend ranging from 30 per cent to minus 35 per cent; between 1853 and 1870 the average return was eight per cent.[587]

Figure 28. The Assam Co. profits, 1853 to 1870.
Source: Antrobus, *the Assam Company*, 407–409.
Notes: The reported profits were based on the revenues achieved on crops harvested two years previously. A number of other large one-off income streams significantly affected revenues explaining the spike in 1862. The values are real and have deflated using the CPI index in Feinstein 'Pessimism perpetuated.'

A similar trend is observable in the share price, seen in figure 29. From being offloaded for pennies when the company faced bankruptcy in the 1840s, the shares reached a high of £52.25 in 1863 at the height of the tea mania. However, the price slid precipitously between 1865 and 1869 reaching a low of £13.62. The bursting of the tea bubble certainly dampened the market, yet the firm's failures in production, caused by problems in the management and governance,

[587] Antrobus, *the Assam Company*, 407–409. The firm's report to shareholders included a balance sheet and profit and loss account to indicate performance. Determining the scale of dividends and distribution of bonuses used a similar rationale to Return on Capital. The ROCE calculation used the £200,000 paid-up capital figure.

was central to the slump in profits and subsequently investor confidence. The volatile nature of the tea industry in the 1860s and the speculative nature of colonial investments would also, however, have contributed to the rapid swings in share price as well as the actual performance of the firm.

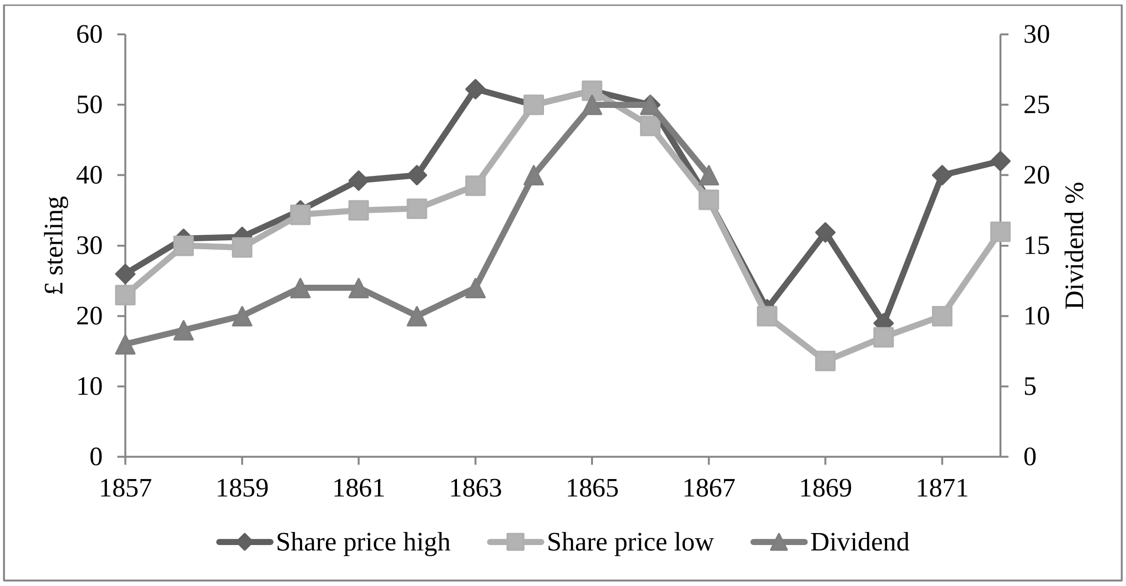

Figure 29. The Assam Co. London share price and dividend, 1857 to 1872.
Source: Antrobus, *the Assam Company*, 407–409.

The performance of the Assam Co. over the period of this study can be assessed on a number of levels. Simply put, it had survived the initial difficulties of establishing the industry in the wilds of Assam. The company had overcome management crises, increasing competition, and the tea boom and bust. The firm developed capacity to overcome the numerous constraints created by the environment and lack of infrastructure, emerged as a profitable enterprise.

Yet, returns to the shareholders were volatile. The average ROCE was significantly lower than that achieved by the trading firms. The two crises were predominantly the result of faults in the management of the firm. The changes in the organisation over the period point to significant challenges in establishing effective management systems and governance. How, then, should the decision to leave behind the established network structure and utilise the joint-stock form be understood, and why was the firm unable to develop effective governance?

7.6 Capital intensity, transactions and asset specificity

The significant differences in environmental and demographic conditions between the established indigo industry in Bengal and the tea industry in Assam, presented the entrepreneurs with a new set of incentives and constraints. These conditions reshaped the transactions undertaken by the firm and explain the decisions to internalise and integrate production and marketing functions. This partially explains the different model of ownership and organisation to the networks of trading houses and producers that had previously dominated in Bengal.

The critical early decision was the move away from the sub-contracting model of cultivation found in Bengal. The early AGM reports show that the hopes of establishing such a system were quickly dashed due to the low supplies of local labour. To ensure production of a sufficient quantity of tea leaves and avoid the potential for hold-up in the supply the directors quickly took the decision to fully integrate this transaction.[588] The structure of the industry saw the market and bi-lateral governance mechanisms preferred in indigo made redundant and enforced a unified system to be adopted to ensure the supply of leaves.

The firm had to invest in developing the gardens through land clearances and building the factories. The lack of basic infrastructure, particularly in transportation, was also a constraint and source of hold-up that required investment. In the first few years the directors regarded these investments as occasional start-up costs. However, it became apparent that it was necessary to expand productivity to achieve a scale of production capable of creating a viable market for Assam tea in Britain. Later, as the number of firms in the industry increased competition for land became more intense incentivising further expansion. Land purchases and clearances became, themselves, a recurrent set of transactions and investments in the late 1850s and 1860s.

[588] Roy, "Indigo and the law," Kranton and Swamy, "Contracts, Hold-Up, and Exports: Textiles and Opium in Colonial India," both identify the threat of hold-up in various export products in part due to the weak contracting environment in India. The difficulty in enforcing contracts and subsequent volatility in output were a significant incentive to identify integration opportunities and may have encouraged the development of different systems of organisation.

The extent to which the transactions for tea can be regarded as asset specific is less clear. In the early period there were few alternative uses for the land and equipment in Assam once it was developed for tea, increasing the asset specificity of the transactions. The costs of untimely dissolution also increased as the residual resale value of the assets was low, and it was unlikely that if the owners chose to wrap-up the company their sale would cover outstanding liabilities.[589]

However, in the 1860s as the industry and region developed, the land, gardens, and equipment could be sold or used for other purposes, lowering the specificity. Initiatives from both the government and private bodies supported the development of transport infrastructure on the Brahmaputra, which also reduced the need for certain investments.[590] Similarly, the threat of hold-up over the supply of tea also diminished over time as more firms entered the market. Certainly, though, the type of investments required to enable the production of tea at viable levels between 1840 and 1870, and the threats of hold-up encouraged integration.

The other significantly different transactions within the tea industry were those for labour. The expansion of the gardens rapidly increased the need for coolie labour, and the lack of local supply forced the firm to look outside the region. This was a recurrent and potentially expensive transaction, as increasing competition and high mortality rates increased the costs of recruitment. The market was predominantly used to manage these transactions as there was little specificity, although attempts were made to lower the transaction costs. In 1859 various tea planters formed an association in an attempt to improve the recruitment market, securing supplies of labour whilst lowering competition and opportunistic behaviour between the firms.[591]

The sources revealed the continuous efforts made by the firm to find experienced and knowledgeable managers who were critical in enabling the gardens to operate effectively. The

[589] Antrobus, *the Assam Company,* 360-361.The limited residual value of the assets was revealed when the steam boat was sold to generate funds. It had cost Rs. 130,000 (£13,000) to construct and ship from London in 1841; by 1846 it was sold for Rs. 70,000 (£7,000). The gardens, themselves, would have had even lower residual value in this period.
[590] LMA MS8803/1 Undated three page draft discussing the establishment of improved shipping and steam navigation links between Assam and Calcutta, LMA MS8803/1 The eastern Bengal flotilla, Assam coal and trading company prospectus, 1863.
[591] Griffiths, *History of Indian Tea,* 102.

problems of the 1840s highlighted the need for specific knowledge of tea production and conditions in Assam. The pool of supply was small, and the churn caused by the high mortality rates in Assam called for regular hiring. The competition for experienced managers intensified in the 1860s as new firms entered the market. There was a high threat of hold-up if firms relied on accessing knowledge from external sources or if those possessing it sought to exit the firm. The increased use of contracts and incentives in the 1860s show the more complex governance used to capture and retain experienced managers.

7.6.1 Integration and the abandonment of the network model

The changes to the transactions created an imperative to integrate the production process, but, as shown in the previous cases, this could have been organised through a partnership of trading firms and factory owners. Indeed, the early reports showed there was an expectation that a ryoti system would be established. These networks had, however, created various opportunities for hold-up and inefficiencies. The control exerted by the trading firms over the flow of information and credit left the indigo factory owners with little bargaining power. Whilst the trading firms were threatened by hold-up in supply from the producers. Integration of the production and marketing functions could reduce the threats of hold-up and lower the transaction costs, such as brokerage fees and contracting, of using the markets and auctions in Calcutta.

The sources clearly show the importance attached to the capacity to control two critical functions of profitability: costs and quality. Capacity to control costs was an obvious strategy to improve profitability, yet the trading firms were constrained in their capacity to control the costs as they purchased products through the auction system. The other significant determinant of the price of tea was quality.[592] Improving quality required investments in the production process and human capital, and integration improved control over these investments and processes. An integrated structure also allowed the London board to use its knowledge of the consumer market

[592] Griffiths, *History of Indian Tea*, 106. Robert's comments in 1866 show the increasing importance of quality in determining the industry's performance.

in Britain to control quality in line with market demand. These factors became increasingly important as the industry became more competitive.

It was notable, though, that in a market where quality differentiation was a high, but subjective, component of pricing, an intermediary was retained to manage the sales process. Although this incurred costs and retained the possibility of opportunistic behaviour, with agents able to manipulate information asymmetries regarding quality and price, the skills of the brokers in undertaking these specialised tasks resulted in their widespread employment. The long standing relationship between Thompson and Co. and the Assam Co. built trust between the parties and the proximity of the directors in London also allowed them to monitor these activities, overcoming concerns of opportunism.

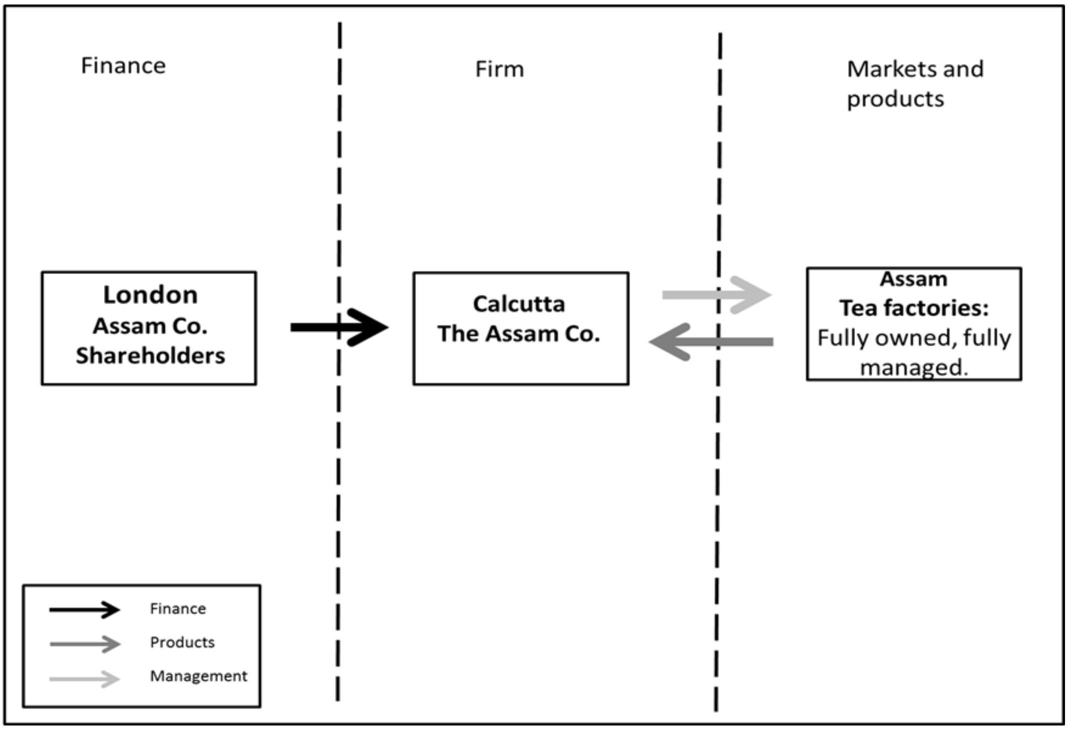

Figure 30 The organisation of the Assam Co.
Sources: Antrobus, *the Assam Company*, LMA MS8796/1, a Bill for the Incorporation of the Assam Company, 1865
Notes: See figure 12 notes for details of the legend.

The results of the integration are shown in figure 30. The firm now directly owned and controlled activities in each of the main centres of operation. The capital was raised by the firm in London and remitted to Calcutta. The board in Calcutta negotiated for credit and mediated flows to

Assam. The product was shipped directly by the firm to London. The integration significantly reduced the threats of hold-up and opportunism and thus offered better protection of the investments. Greater control over production and marketing helped to overcome issues of bounded rationality, integrating knowledge of all aspects of the market within the firm.

7.6.2 The Joint-Stock form; a rational response

The decision to internalise these transactions resulted in a growing need for fixed investments, to a level much greater than for indigo. Ray calculated that there were no fixed capital investments made in the Bengal indigo sector after 1829. Between 1825 and 1829 only £67,000 was invested in the whole sector.[593] The Assam Co. spent £70,000 in the 18 months after its launch in 1839. Using the figure of 35 per cent derived from the spending in 1840 this would equate to £25,000 of fixed cost investments in this short period alone.[594]

These investments required capital, and whilst the increasing number of joint-stock banks had improved the supply of credit leading to a gradual decrease in the interest rates, the sector predominantly dealt in short-term loans backed by collateral. The solution was to raise capital in the more liquid markets of London which could fund the high start-up costs and subsequent expansion. The joint-stock form enabled capital to be raised in London and Calcutta with investors in both locations able to buy and transfer shares. This provided the firm with both long-term and working capital reserves. This gave the owners greater financial autonomy than the partnerships, such as Gisborne and Co., which were reliant on bi-lateral relationships to provide much of this financing.

The joint-stock form offered two distinct benefits to investors. The first was the diversification of risk. With over 300 shareholders in 1840 the risk was spread much further than the five or six partners' common to the trading partnerships. Second, freely traded shares offered protection from untimely dissolution. This, due to the divergence in the costs and resale value of the fixed

---

593 Ray, *Bengal industries and the British industrial revolution*, 227. There was, however, expansion in areas outside of Bengal, particularly Bihar, which would certainly have involved fixed capital investments.
594 See p.214 for the breakdown of costs incurred by the Assam Co. in 1840.

assets, was an increasingly valuable feature. The ability to sell the shares gave investors an option to exit that did not threaten the dissolution of the whole firm. These features ensured that capital was retained in the gardens even when a rush to exit the firm and withdraw capital at critical moments in the 1840s and 1860s could have dissolved the firm. The benefits of risk diversification and limited liability were great advantages over the partnership form.[595]

The joint-stock was also a more flexible form than the partnership for investors seeking a channel into profitable but risky colonial investments. The early discussions on founding the firm in 1840 were between disparate investors in both London and Calcutta seeking profitable opportunities in the experimental tea gardens. The level of investment, often amounting to thousands of pounds, required to enter a partnership would discourage many small or causal investors who could, instead, purchase shares in the Assam Co. for £50. Tradable shares also mitigated the time lag investors faced in realising profits, as they could sell at any point, whilst partners had to wait for annual returns or often a period of years until their capital was released.

It would have been difficult for a firm without these features to establish itself in the tea sector in the 1840s. The deep investments in fixed assets would have strained the largest partnerships. By 1840 Gisborne and Co. had over £100,000 of retained capital, and although not the largest of the trading firms it was certainly amongst the bigger firms of this type.[596] For the five partners to commit £70,000, of which £25,000 was into non-liquid assets in a single year would have been an immense risk, hence their decision to use multiple-shareholder private companies to undertake the comparatively smaller investments in indigo.[597]

The sources suggest a strong correlation with the capital intensity explanations regarding the adoption of the joint-stock form detailed in chapter 6. The joint-stock form was a natural progression from the experiments with private multiple-shareholder firms to deepen capital reserves, as the changes in legislation made it easier to incorporate. Yet, in the 1860s firms with

[595] The firms could obtain limited liability automatically from 1857, but the deed of settlement sought to provide limited liability to shareholders in 1840.
[596] See figure 14, p.143 for Gisborne and Co.'s retained capital.
[597] See chapter 5.4 for Gisborne and Co.'s operations in the indigo sector.

much smaller capitalisation were entering the tea market and able to take advantage of the developed infrastructure. The paid-up capital of many of the new tea firms was lower than £40,000 suggesting that capital had become a less critical factor in establishing a viable operation, although other benefits such as risk diversification and its role as a conduit for investment continued to make the joint-stock form attractive.[598]

7.6.3 A hierarchical system of management

The decision to integrate the various functions under the joint-stock form affected the management systems employed by the firm. The network of bi-lateral agreements between firms and partners within the partnership were replaced with a single entity organised as a hierarchy of owners and managers. These changes affected the way in which the firm managed the critical flows of finance and information, vital to the success of the firm.

Knowledge and expertise on production needed to be obtained and shared with the operations in Assam. Likewise information of market conditions in Calcutta and London needed to be collated and coordinated between the boards and the managers. Information on the levels of production in India and demand in Britain was important, but the consistent upward trend in demand and general increase in prices meant there was less pressure to coordinate information on supply and demand as in the indigo market.

There were though two key pieces of information the firm needed to guide decision making. First, information relating to consumer tastes and the effects these had on the prices of different tea grades in London.[599] Second, the need for information related to the costs and productivity in Assam. Both were critical in shaping decisions regarding investments, planting and production. When the firm struggled to ensure the flow of this information the problems were

[598] See chapter 6.6, p.199, for capitalisation in the tea sector.
[599] LMA MS09936 Record book of sales of packages of Assam tea transported and sold, on account of the company, by William James Thompson and Henry Thompson. BB HC2 2381 No. 162 William James Thompson and Sons, tea circular, annual report and statistics of tea. Both the internal reports and the information generated by the brokers indicate the effort made to track the effects of quality on prices.

severe. The difficulties in the 1840s were a direct function of the lack of good information related to operating the gardens.

The sources show the extensive efforts made to improve the quality and quantity of the information passing between the different centres. Streamlining the reporting structure by reducing the number of superintendents was one of the first reforms. Later reforms such as the printing, mimeographing, and controlled distribution of the correspondence were also undertaken to smooth the flow. The development of the cost metrics and benchmarks were central to improving decision making and subsequently the performance of the company in the 1850s. Yet, the difficulties in coordinating the flows of information and credit persisted into the 1860s and were major components in the firm's disastrous performance at that time.

The firm also needed access to credit in India to fund the operations in Assam. The aim was to fund each crop out of the revenues achieved from the previous year which, although a useful way to account for costs and revenues, was difficult to implement in practice. The time difference between dispatching the tea from Assam to booking the revenues in London and subsequent remittance of funds ensured that the directors in Calcutta had to fund the costs of two crops at any one time.

Without the intermediation of a trading firm credit now had to be raised directly. It could be supplied by remittance from London, but the directors opted instead to utilise short-term credit obtained in Calcutta.[600] The relative costs of credit, remittances, and interest had to be balanced. The flows of credit then had to be synchronised between London, Calcutta and the gardens in Assam. However, shortage of funds was a problem in Assam and shortfalls led to wages being unpaid, indicative of the difficulties in mobilising sufficient credit.[601]

[600] LMA MS8803/1, reprinted letter from H.M.Kemshead Chairman of Assam Company to W.Theobald Calcutta, November 3rd 1866.

[601] LMA MS8803/1, reprinted letter from Bainbridge to the chairman April 27th 1867. This mentioned that the March wages were unpaid and April nearly overdue, due to the inefficiency in coordinating the flow of credit in Calcutta. It is difficult to ascertain if this was a regular occurrence, but if so, it presents a further plausible explanation for the opportunistic behaviour in Assam as unpaid managers sought other forms of remuneration.

7.7 Failed experiments with governance

A unified hierarchical structure should, theoretically, have improved attempts to streamline the reporting, provided clarity over lines of authority and enabled greater monitoring and control of the operations in Assam. The networks of trading firms and producers involved levels of intermediation that would potentially slow the flow of information, disrupt decision making, and offer opportunities for hold-up. However, the crises faced by the firm were at heart failures of management. Why were they unable to make the hierarchy work effectively?

Edward Money noted a trend amongst tea firms during the boom of the early 1860s,"Boards [were] highly paid with secretaries still more liberally remunerated, were formed both in Calcutta and London to carry on the enterprise; and in short, money was lavished in every conceivable way, whilst mismanagement ran rampant in every department."[602] Board members opportunistically used the firms, often at the expense of minority shareholders and managers, for personal aggrandizement with few checks or balances to stop them. The separation of ownership and control in the joint-stock form resulted in diverging interests amongst principals and agents which, without effective governance, could result in each pursuing their own interests at the expense of the other.

These problems were particularly acute in the Assam Co. and other Indian tea firms. The shareholders, many of whom were in London needed to monitor their capital 10,000 km away in India. The initial negotiations and memorandum of agreement attempted to balance the interests and reduce the threat of minority repression amongst a diverse group of owners, and contained various clauses aimed at protecting the rights of the shareholders.[603]

The main governance mechanism to provide oversight for the shareholders was the dual-board structure which served two main functions. The first was to improve decision making at the local level, whilst improving monitoring and oversight of the operations in India and protecting the

---

[602] Griffiths, *History of Indian Tea*, 96.
[603] The removal of the fraudulent directors in 1863 showed that some protection was offered through the clauses of the memorandum.

interests of the owners in London. The second was to offer protection to the minority of shareholders in India by giving them certain decision making powers that prevented their interests from being repressed by the majority of shareholders in Britain.

The efforts to locate decision making at the local level, where information was best and communication was easiest, whilst control over the firm as a whole was retained by the owners, or risk bearers, in London, corresponds well with Fama and Jensen's theory of optimising firm ownership.[604] Yet, the failure to define the decision rights within the dual-board structure resulted in confusion and inertia amongst the principals. This lack of clarity was central to the crisis in the 1840s and a contributing factor in the collapse of production in the 1860s. The difficulty in ensuring the effective dissemination of information left the London directors unable to understand the situation in India, and despite the supposed delegation of decision making to the Calcutta board the poor performance saw trust between the two groups strained. As the relationship between the directors broke down, opportunism amongst the board members increased as interests diverged. The resulting fraud by directors in Calcutta not only saw resources misappropriated, but misreporting of information and turning a blind eye to opportunism in the gardens led to poor decision making on various levels.

The divergence in the relationship between the boards was never fully resolved. Efforts such as the creation of paid executive positions for board members in India sought to achieve better alignment between the principals.[605] Similarly the reorganisation of the reporting and monitoring systems helped to appease the board in London. That it took almost thirty years for the London board to use the ultimate sanction available to them and abolish the Calcutta board showed the importance attached to maintaining a balance of interests amongst the shareholders. Retaining the expertise and knowledge of the shareholders in Calcutta was important when direct

[604] Fama and Jensen, "Separation of ownership and control." The choice of organisational form was determined by efforts to optimise the distribution of control and decision rights.

[605] This was an interesting reversal of the problem within modern corporations, whereby agents are offered shares to align their interests with the principals. In this case the principals were offered a wage to give their full efforts to the firm.

knowledge of India and the tea sector was lacking in London. However, the decision to disband the Calcutta board finally centralised control in London, although decision making rights remained with the superintendents in Assam and the agent in Calcutta.

7.7.1 A problem of incentives

The physical and meta-physical separation of the owners and managers was perhaps the most significant challenge the firm faced in this period. Two interlinked issues were at the heart of much of the efforts to reform the organisational structure of the firm; the need to find and retain high quality managers, and subsequently align the interests of these agents with the principals in Calcutta and London.[606] The physical separation of the managers in Assam from the directors enabled opportunistic action and problematized the various solutions attempted to resolve these issues.

Due to the increasing scale and competition within the tea industry in the 1860s more knowledgeable and experienced managers were required. This strained an already small pool of talent. Owners in Britain often had little understanding about the skill-sets needed to manage a tea garden or information about whether an individual possessed them. These information asymmetries enabled unskilled individuals to pass themselves off as experienced and be hired.[607]

The limited supply and increasing demand also encouraged the assistants and superintendents to seek better rewards. A director noted that “the spread of tea cultivation all over India caused our assistants to have an undue appreciation of their worth, and here and there they left us for higher pay, or from a feeling that they could better themselves as masters.”[608] If their demands were not

---

[606] The correspondence in the early 1860s attributed the problems to the loss of key managers and directors. Similarly, the response to the crisis of the 1840s had been to sack the three original superintendents, and seek better individual managers.
[607] Griffiths, *History of Indian Tea*, 97. Money described the pervasive poor quality of managers in the industry at this time. As Akerlof, “The Market for Lemons”, pointed out the problems of information asymmetries saw firms face higher chances of hiring a ‘lemon’ from the pool of potential managers.
[608] LMA MS9935, letter entitled Response by Mackay to the remarks by Burkinyoung, 23rd April 1862.

fulfilled the managers could leave or opportunistically improve their conditions in the knowledge that the firm had little power to stop them.

Far away from their principals the managers pursuit of their own interests was made easy as monitoring was difficult and costly. The efforts of the board in Calcutta to provide oversight were often incompetently handled, sending individuals with little knowledge of tea production to Assam to report on activities.[609] The efforts to cut costs also reduced the number of managers capable of monitoring the operations in Assam. In 1840, three superintendents oversaw 20 assistants across 1,200 acres; by 1862 one superintendent was in charge of 23 assistants spread over 4,800 acres.[610]

To lower the threats of opportunism and retain the better managers a whole range of formal and informal corporate governance mechanisms were employed. In the period before 1860 the use of informal tools was prevalent. It was notable in the correspondence dealing with recruitment the importance the directors continued to place on attributes such as 'character'.[611] Like the trading firms, finding individuals who could socialise and adapt quickly within the colonial environment was regarded as a way of engendering trust and aligning interests. The managers of a tea garden, however, required expertise in production and a capacity to manage large numbers of Indian workers, a different set of attributes to those working for the trading firms in Calcutta. These were found in men often from different backgrounds to those occupying the positions on the board. These bonds of character were thus weaker and less effective.

Allowing the managers to develop private gardens, or hold interests in other companies, were informal financial incentives that both managers and directors in Calcutta took advantage of. This system was similar to the private trade incentives offered to EIC servants. It is plausible that these were expedient practices due to the environmental conditions and difficulties of

---

609 Antrobus, *the Assam Company*, 54-57.
610 Ibid, 425.
611 Ibid, 55. The London board described one superintendent as, "a gentleman of high standing and character, upon whose judgment and integrity, the most entire confidence could be placed," no mention of his knowledge of tea, or indeed India, was made or deemed necessary for discussion.

monitoring, or were simply promoted by the more self-interested directors to excuse their own malfeasant behaviour.[612] They were certainly perverse incentives from the standpoint of the shareholders in London, as it encouraged resources to be misallocated, and for managers to exit the company once their own interests were well-developed.

The informal tools were increasingly ineffective and gradually replaced by more formal governance mechanisms in the 1860s. The employment contracts contained a blend of incentives and control mechanisms that sought to better align the manager's interests. Clearly one of the major concerns was of the manager not devoting their full attentions and efforts to the firm, and the contracts banned these activities. Other mechanisms such as maintaining personal accounts improved monitoring of the managers activities. The option of dismissal for failure to abide by the regulations gave the company a severe sanction with which to threaten the managers.

To be effective the clauses of the contract needed to be enforceable. The growing use of the contracts, and the encouragement of the firm's solicitor to seek legal redress regarding the fraudulent directors, point to a growing confidence in the legal system to enforce the contracts. The attempts to use the legal system in Calcutta were, however, unsatisfactory, severely limiting the effectiveness of coercive measures.

The other strand used to align the interests was incentives. The firm increased the wages for many of the key managerial positions in Assam. A clearly defined set of incremental wage increases were also stipulated to encourage managers to remain with the firm. The contracts also stipulated terms for leave and other benefits such as free travel and housing that acted as incentives. Finally, the bonus scheme, drawn from profits, was introduced to provide managers with an incentive directly linked to productivity, the improvement of which benefited both principals and agents.

Despite these efforts the misalignment of interests between the principals, and between principals and agents, created a constant source of opportunism that disrupted the critical flow

612 Hejeebu, "Contract enforcement in the English East India Company."

of information and compromised decision making, contributing to the managerial failures of the 1840s and 1860s. Despite numerous efforts to reform the corporate governance to overcome these problems the mechanisms available to the owners of the Assam Co. was insufficient to achieve alignment. The final solution was to abolish the Calcutta board, giving over control of much of the operations in India to paid managing agents.

7.8 The effects of a separation of ownership and management

The new industries, such as tea, that emerged after 1850 offered entrepreneurs a distinct set of challenges. The investment in the fixed assets of the gardens and the human capital of the managers fundamentally changed the characteristics of the transactions undertaken by the Assam Co. and other tea companies, significantly increasing asset specificity. This provided a clear rationale for the firms to adopt a unified form of governance, fully integrating the transactions. The sources show that the move away from the established ryoti model of production and networks of traders and producers, in both the tea and indigo sectors, occurred as their geographic location moved away from the fertile populated plains of Bengal.[613] The lack of infrastructure and a local work force quickly made integration an imperative. The evidence also showed the growing need for control over key determinants of profitability, costs and quality, better enabled by integration.

The price of integration was, though, an increased need for capital. The level of investment, with a lag-time of several years until profits could be generated, would have stretched the financial resources of large trading partnerships like Gisborne and Co. The act of incorporation confirmed that the rising capital requirements and a desire to diversify the risk amongst multiple shareholders were the main motivations for utilising the joint-stock firm.

The founders saw it as an effective mechanism to channel capital from London to Calcutta, with British investors accounting for around 80 per cent of the invested capital, allowing the firm to

[613] See chapter 3.4.1 and 3.4.2 for the change in the indigo sector brought about by the shift to the zerat system of production in Bihar.

sidestep the problems of the thin Calcutta financial markets. The joint-stock form provided a greater degree of autonomy, integrating the transaction for capital, thus avoiding the threats of hold-up or untimely dissolution faced by Palmer and Gisborne and Co. It was notable that much of the annual credit was funded by local banking sources, indicative that the Calcutta market for credit was improving. The form also provided a better mechanism to overcome the increasing costs of untimely dissolution, as freely transferable shares offered a major improvement on the complex partnership arrangements needed to govern the exit of an investor.

In this form the firm established the structure of the tea industry in Assam, generating periods of profits and dividends for the owners. Yet, the integrated joint-stock model created distinct managerial problems. Achieving a balance of interests between the different groups of owners, in London and Calcutta, and the managers in Assam proved difficult. The failure to align these interests resulted in the repeated managerial crises of the 1840s and 1860s. These problems were resolved by the appointment of a managing agent in 1868.

Agency cost analysis revealed two distinct issues that undermined the firm's performance. The dual-board structure established in the Act of incorporation was central to firm's governance arrangements. Theoretically this should have proved an optimal distribution of decision rights in Calcutta and control rights in London, but the sources showed that reporting problems enabled opportunistic behaviour and a break down in trust between the principals.[614] The second issue was the ineffectiveness of the incentives and enforcement mechanisms used to control agents in Assam. The salaries and bonuses were underpowered, whilst private trade encouraged opportunistic behaviour. These factors also contributed to the hiring of poorly qualified managers, less capable of managing the costs or achieving the quality required to be profitable.[615]

The sources correspond to the narrative of the joint-stock form proliferating in industries with increasing capital intensity. They also support Wilkin's description of FSCs as conduits for

---

[614] Paul Johnson, *Making the market: Victorian origins of corporate capitalism*, Cambridge University Press (2013), describes the ongoing problems throughout the second half of the 19th century in monitoring board members of corporations in Britain, indicating that this was a widespread issue.
[615] Akerlof, "The Market for 'Lemons.'"

foreign direct investment, and Hennart's proposal that their organisation was driven by the decision to internalise markets for credit and capital.[616] The declining capital intensity in the sector does, however, suggest a shift in the impetus for integration. The increase in competition in the 1860s put greater emphasis on the firms' ability to control cost functions and raise quality to be profitable. A rationale closer to Casson's interpretation of the FSC form emerges, in which the organisation was focused on enabling flows of information and know-how.[617]

The agency cost analysis does offer a distinctly different interpretation for the difficulties in establishing the joint-stock form in the tea sector and more generally in India.[618] When stripped of the powerful bonding mechanisms engendered by the partnership form the problems of governance created by the separation of owners and managers proved extremely difficult to overcome.[619] These problems were exacerbated by the fact that much of the capital was British, and the British owners had limited capacity to monitor their investments in India. There are also strong similarities to Hilt's finding in the 19th century whaling industry. The underpowered incentives and control mechanisms available to the joint-stock form at the time proved ineffectual in the hiring and retention of good managers, relative to those of the partnership.[620] As Smith prophesied 'negligence and profusion' became endemic.

There are, though, limitations to the generalizability of this explanation. The experience of the Assam Co. as the first mover in the industry, largest tea firm in terms of capital, and virtual monopolist for nearly twenty years, was a unique trajectory.[621] Similarly, the tea sector was a

---

616 Wilkins and Schröter, *The Free-Standing Company*. Wilkins described firms that had all their operations and management overseas with little activity in the market where the firm was incorporated and raised capital. In the case of the Assam Co. the dual-board structure gave decision making capabilities in both locales, not conforming totally to the FSC model. Hennart, "Transaction-cost theory and the Free-Standing Company."

617 Casson, "An economic theory of the Free-Standing company."

618 Michael Aldous, "Avoiding negligence and profusion: The failure of the joint-stock form in the Anglo-Indian trade, 1840 to 1870." *Enterprise and Society*, forthcoming.

619 Sircar, *A tale of two boards.* The agency cost analysis further develops Sircar's claims that the problems faced by the firm were a function of failures in management, rather than solely difficulties of the environment.

620 Hilt, *Incentives in corporations.*

621 Rungta, *Business corporations in India*, appendix 8, found that the failure rate amongst joint-stock tea firms was 1 in 3. The Assam Co. also had the largest nominal and paid-up capital of any tea firm until late in the 19th century, so in terms of its size and survival it was in a small minority of larger ventures in the sector.

highly distinct setting, with the costs of agency dramatically increased by the environment in Assam. Operating a cotton or jute mill close to Calcutta was a very different proposition. The adoption of the joint-stock form in the tea sector was also on a scale not seen in other sectors with over three times more incorporated firms in 1868. This dramatic increase is indicative of a speculative agenda behind the use of the joint-stock form that may not have been prevalent in other sectors.

It is clear, though, that entrepreneurs recognised the joint-stock form as an important tool in channelling and pooling capital, leading to its widespread employment in tea and other emerging industries with increasing capital requirements after 1850.[622] Certain similarities across the sectors also remain, in particular the separation of owners in Britain from owners and managers in Calcutta. However, the trade-off created by the need to raise capital and diversify risk against the capacity to effectively manage agents meant that in only a decade entrepreneurs began to look for new organisational solutions. In 1868, as the owners of the Assam Co. turned to the services of a managing agent, nearly 50 per cent of joint-stock firms in Calcutta had also made the same choice.

[622] Figure 24, p.197, table 15, p.199 show the scale and breadth of the adoption of the joint-stock form.

Chapter 8 The best of both worlds: Ogilvy, Gillanders and Co.

8.1 Introduction

In 1866, as the owners of the Assam Co. abolished the dual-board structure and turned their attentions to finding a managing agent, the partners at Ogilvy, Gillanders, and Co. (Gillanders and Co.) took on their first agency contract in the tea sector. A director of the Assam Co. dismissed the benefits of the managing agents claiming it was not "advisable to put the affairs under a paid agency acting under orders from home … Even if you can secure honesty above all temptation no salary will ever create the energy of self-interest."[623] Why then did the Assam Co., and many other firms in Calcutta, turn to these firms to solve the problems of agency?

The chapter uses a range of sources from Gillanders and Co. to examine the progression of the firm from its foundation in 1825 as a commission trading firm, through integration into indigo production in the 1840s, and subsequent diversification in the 1850s and 1860s to include an increasing portfolio of agency contracts. Examining several of these contracts with tea firms, shows the various managerial activities that were contracted by the firms under management and the level of ownership and control Gillanders and Co. had in the ventures. Analysis of the partnership agreements reveal the incentives and bonding mechanisms that allowed the firm to greatly reduce agency costs incurred through these activities.

These findings challenge Chapman and Rungta's explanations of the rise and proliferation of the managing agents by confirming their importance in providing managerial services to joint-stock firms. The findings also reinterpret the importance of the partnership form to these firms, which rather than being a mechanism for retaining control and profits between small numbers of partners, allowed the managing agent firms to hire better managers and deploy them more effectively at distance to reduce agency costs.

[623] LMA MS8803/1, reprinted letter from A. Peterson to the Directors, August 1863.

8.2 Established as commission traders

Thomas Ogilvy and Francis Gillanders both trained and worked for John Gladstone head of the large Liverpool trading firm Gladstone and Co. The firm had been the first to send a ship to India on the rescinding of the monopoly in 1813.[624] In 1818 it had six ships licensed to trade with India and it was as an agent for these ships in Calcutta that Francis Gillanders gained experience of the Anglo-Indian trade.[625] These experiences encouraged the two to found their own venture in 1825.

Their early activities were shaped by this work at Gladstone and Co. whose business was predominantly as shipping agents, undertaken by a large fleet owned and operated by the firm. The new venture provided a complimentary service, receiving consignments in Calcutta from manufactures in Manchester and Glasgow, whilst using Gladstone's shipping capacity to freight the goods.

The activities of the firm were formally laid-out in a deed of partnership drawn up in 1825.[626] The agreement detailed a capital investment of £10,000, equally split between the partners. Gillanders was to remain in Calcutta and found what would become, Gillanders, Arbuthnot and Co., whilst Ogilvy was to return to Liverpool and establish Ogilvy, Gillanders and Co. Other terms in the agreement stated that each partner would receive five per cent interest on their invested capital, and had a right to withdraw up to £300 per annum out of his share of the profits. The partners were not to engage in separate business outside the firm and Gillanders should return to England when he wanted.[627]

[624] John Gladstone was the senior partner of a well-established trading firm based in Liverpool that had strong trading links in the West Indies and, after 1813, in India. He was the father of William Ewart Gladstone, the three times Prime Minister of Great Britain. Henry Gladstone, the brother of William Ewart, entered Gillanders and Co. as a partner in 1876.

[625] GG 2749, *The History of Gillanders*, 5-6.

[626] GG 2695, Original copy of the Memorandum of agreement between F.M.Gillanders on the one part and Thos. Ogilvy on the other, both now Calcutta 24th Sept 1825.

[627] GG 2749, *The History of Gillanders,* 13. In fact Ogilvy paid Gillanders 20 per cent of his personal profits to remain in India.

The core activities of the firm were delineated, "The Calcutta business was to be 1) transacting the business of the vessels consigned, 2) receiving consignments of goods, 3) advancing on consignments where necessary, 4) making advances to indigo planters or other consigners of produce. In Liverpool 1) sales of shipments from India, 2) purchase of goods in execution of orders."[628] In the first 15 years the partners predominantly focused on this commission trade in British exports and shipping agency work.[629]

The firm's capital and workforce grew rapidly. In 1826, David Gladstone, brother of John Gladstone, entered the partnership. He invested £10,000 but agreed to an equal split of the profits between the three partners. The agreement exempted him from going to India, and he was designated the senior partner. A further clause was inserted that called for an 18 month notice period from any partners that wished to retire.[630] Gillanders also hired two assistants in Calcutta, although one died whilst the other retired ill. This led Ogilvy to proclaim that the firm always needed "four white faces" in Calcutta to ensure sufficient capacity to undertake operations there. Further assistants were sought, and a fourth partner was also identified to go to Calcutta.[631]

The man selected, John Jackson, was hired due to his strong book keeping skills. However, he had no capital to invest and was instead hired as a salaried partner. He was mandated to remain in India for the whole seven years of his contract.[632] In 1831 the firm sought further expansion, opening negotiations with a number of different possible partners. It was finally agreed that George Arbuthnot would join the firm, and a new partnership agreement was signed in 1832.[633] This renewed, for a further five years, the basic clauses of the existing agreement, but accounted for Arbuthnot's investment of £20,000 into the firm. In six years the firm had expanded to

[628] GG 2695, Original copy of the Memorandum.
[629] The firm acted as agents in port for ship owners, finding and loading cargoes and passengers one way, and unloading and storing on the reverse. Little evidence remains of this work but GG 2695 contains paperwork of such a transaction between Gillanders and John Gladstone in 1829.
[630] GG 2695, 1826 Agreement between David Gladstone, F M Gillanders and T Ogilvy.
[631] GG 2695, 1828 Letter from Ogilvy to Gillanders.
[632] GG 2695, 1828 Admittance of John Jackson as a partner to go to India. In his first year of employment he received £300 per annum, which, on ascending to partner he would retain and also receive a profit share. He was offered 1/10th of the profits for two years, to increase to 1/7th in the years after. He could draw £300 a year, but the remaining funds from his profit share were to be used to build a capital stake.
[633] GG 2695, 1832 Memorandum between Ogilvy, Gillanders and GC Arbuthnot.

include five partners, various assistants in Liverpool and Calcutta, and £40,000 of invested capital.

In 1834 David Gladstone exited the firm and both of the founding partners' contemplated retirement when the partnership agreement expired in 1837.[634] Ogilvy, recognising the problems the firm would face if both withdrew their capital in the same year offered to remain for a further year or two if his current share of the profit, £2,000 per annum, was guaranteed.[635] This was agreed, and over the following years the partners retired.

In 1840 two new partners joined the firm: Adam Gladstone, and George Gillanders, son of Francis. They both went to Calcutta, allowing John Jackson to return to the UK. A new partnership agreement, initially for seven years, was signed by all the partners.[636] The new partners were to "take their share of the risk" by investing £10,000 each. In 1840 this meant the total retained capital in the firm was £85,000. The profit share was negotiated around the staggered exit of Ogilvy and Gillanders, and the promotion of Arbuthnot to senior partner.

Table 19. Ogilvy, Gillanders and Co. retained capital and profit shares in 1840

	Capital (£)	Profit Share (%)		
Partner	1840	1839/40	1840/42	1842/47
Thomas Ogilvy	25,000	22	14	0
George Arbuthnot	25,000	22	26	29
John Jackson	15,000	18	22	25
George Gillanders	10,000	12	19	22
Adam Steuart Gladstone	10,000	12	19	22
Francis Gillanders		14	0	0

Source: GG 2695, 1840 partnership agreement.

Each partner was now required to build-up £40,000 of capital in the firm before they could withdraw freely beyond this level. A 12 month notice period was mandated if a partner wished

[634] GG 2695, 1834 notarised document detailing the exit of David Gladstone from the firm. Capital and excess monies owing to him were to be repaid over four years, over which time he would retain his profit share.
[635] GG 2579, 1834 Letter from Thomas Ogilvy to Arbuthnot and Jackson in Calcutta.
[636] GG 2695, 1840 Memorandum of agreement between Thomas Ogilvy, George Arbuthnot, John Jackson, Adam Gladstone and George Gillanders.

to retire, and a three year period would be applied for repayment of his capital. A dispute resolution system was included, by which a dispute between two partners would see the junior partner give way; a dispute between three partners would be resolved through the opinion of the majority. Finally, a serious dispute between all partners could be referred for arbitration to a neutral party. A fine of £10,000 was introduced if a partner undertook business outside of the firm.[637] This agreement was the basis on which the firm would operate until the 1860s.

8.2.1 Policies for conducting trade

The trading activities were governed by policies agreed by the senior partners.[638] The aim was to maintain a small working capital in India as the majority of advances were made in Britain, however, as the business in India grew they needed local credit for advances on goods and to facilitate trade credit for clients.[639] Faced with the thin Calcutta credit market, like the firms before them, they acted as a conduit, advancing credit to manufacturers and trade partners. The partners, though, unlike John Palmer, carefully controlled their lending policies, fearing the effects of capital lock-up in times of economic stress.[640] Arbuthnot requested that loans not be rolled over or overdrafts allowed, except on commercial loans where "tangible and easily realizable security lodged, and a termination, annual if possible to the loan."[641]

In spite of increasing capital requirements in India the aim was to ensure that capital in the country should at no time exceed a year's profit. Like their contemporaries the variable costs of remittance required careful management. Principals were laid out to determine the mechanism, "It was a rule … not to ship produce, on either shipment, remittance or exchange accounts, as

[637] GG 2695, 1840 Memorandum of agreement between Thomas Ogilvy, George Arbuthnot, John Jackson, Adam Gladstone and George Gillanders.
[638] GG 2714, 1873 Copy of correspondence entered into the Chancery Court for Gladstone vs Mackinlay. The document contained numerous transcribed letters between the partner Daniel Mackinlay and the various senior partners in Britain. They were submitted as evidence when the partners took Mackinlay to court to resolve a dispute on his exit from the company discussed later in the chapter.
[639] GG 2714, 1873 Chancery Court Correspondence, 5th December 1846, Arbuthnot to Mackinlay.
[640] Ibid.
[641] Ibid.

long as six months sight bills were had at or over 2 shillings per rupee exchange."[642] If Bills were not available at that rate then goods were used, however the composition and cost of the cargoes needed to be carefully considered, "As a general rule, it is well never to have to many eggs in one basket… it is well never to advance upon anything where the standing charge, such as freight, is large compared to the cost."[643] These principals, underlined by careful management, enabled the firm to survive the crises of the 1830s and 1847.

8.2.2 Expanding the trading network

In 1834 the firm made an agreement to set-up a venture in Bombay, to make advances on cotton whilst receiving consignments from Britain. It was founded with a Manchester based textile merchant named Ewart as partner, and called Arbuthnot, Ewart and Co. Ogilvy and Gillanders personally invested £10,000 into the venture and agreed to leave these funds in the firm indefinitely. The profits were split between the three partners and 5 per cent interest paid on the capital.[644]

The agreement was extended in 1840, and the link between the two firms formalised. The agreement was adjusted to include the rest of the partners, and the activities of the venture were clearly delineated, with business confined to commission and agency trade, although, "when expedient such moderate adventures in merchandise for account of the partnership as may be desirable for making more favourable remittances than the current state of exchange."[645] Ewart also stipulated that he would not work with any other firms. The agreement suggested that the firm was in effect subordinate to the main partnership.

[642] GG 2714, 1873 Chancery Court Correspondence, 21st January 1864, Mackinlay to Gillanders, Arbuthnot and Co. In this letter Mackinlay accused the partners of deviating from the well-established customs of the firm and by doing so reduced the profit that was owed to him. Perhaps then, he overstates the term 'policy', an expedient way of making a point against the firm. Nevertheless it is a useful set of guidelines to consider the parameters within which the partners conducted their activities.
[643] GG 2714, 1873 Chancery Court Correspondence, 6th November 1847, Arbuthnot to Mackinlay.
[644] GG 2749, *The History of Gillanders*, 22.
[645] GG 2695, 1840 Partnership agreement with Ewart to form Arbuthnot, Ewart and Co in Bombay.

A similar arrangement was made in 1851 to found a firm in Manchester, called Gladstone, Latham and Co., which acted as a direct conduit for both firms in India to deal with textile producers in Manchester. The firm directly purchased cotton goods which were packed and prepared for shipping. The interlinking partnership agreements and interlocking directorates bound the various firms together, although the legal constitution of these links was unclear.[646]

Until the 1840s the firm's activities had predominantly remained within the remit set out in the partnership agreements. In his diary, Mohendro Nath Mookerjee, noted that between 1835 and 1840 extensive work was undertaken with piece good agents in Glasgow. Indeed, a nephew of one of the agents joined Gillander's in Calcutta as an assistant to support the trade between the two.[647] Gillanders had also become commission agent for a number of firms, including Bass and Co., Ruinart Pere et fils, and Cockburn and Campbell, promoting and selling beer, champagne and whiskey in the Indian market. The firm also purchased goods in India including indigo. In 1840 they exported 1,277 maunds, which when compared to major exporters such as Cockerell and Co.'s 21,171 maunds, or indeed Gisborne and Co.'s 10,551 maunds, showed they were a minor participant in the market in these years.[648]

8.3 The move into indigo

In 1846 Arbuthnot worried that the firm was drifting too far from their original purpose and should refocus efforts on British consignments; instead the firm fundamentally shifted its business model.[649] The reliance on commission and shipping agency work to generate profits was stable but limiting.[650] In 1844 Gillanders had signed an agreement with Barlow Brothers

---

[646] GG 2713, 1871 Case for opinion of council regarding the arrangements between Ogilvy, Gillanders and Co., Arbuthnot, Gillanders and Co. and Ewart, Latham and Co. of Bombay regarding the arrangements in Bombay and Manchester. A legal opinion was sought to clarify the rights and responsibilities of Ogilvy, Gillanders and Co. to the other firms.
[647] GG 2744, The diary of Mohendro Nath Mookerjee. Mookerjee, joined the firm in 1859, and rose to become a banian. He described the workings of the firm, but also drew on the experiences of his uncle who had been head of the writers department for 40 years from the firm's inception. The extent of this trade was borne out by numerous letters in GG2595 a cash account book converted to a letter book in 1836, by the extensive correspondence with John Craig and other Glasgow piece good agents arranging consignments to India.
[648] BA HC2 259. Translated from French, "Comparative details of the Indigo harvest 1840/41 and 41/42."
[649] GG 2714, 1873 Chancery Court Correspondence, 5th December 1846, Arbuthnot to Mackinlay.
[650] Ibid.

and Co. to support their indigo seed company by providing Rs. 50,000 (£5,000) of annual credit. They were paid a fixed fee of Rs. 2,000 (£200), 10 per cent on the loan and a further 2.5 per cent on cash advances.[651] Barlow Brothers hypothecated the crop to cover the loan, but Gillanders and Co. had no responsibilities towards the actual management of the concern.

Annual advances were also made to indigo factories. This was done to generate revenues and build the firm's knowledge of the indigo market. In particular, giving them insights into the operations of the factory system, "from which we could declare what should be prices."[652] One factory owner's efforts to expand into sugar cultivation proved ruinous, and he fled the country back to France owing Gillanders £20,000, with the factory assets worth only a fraction of the debt. Rather than accept a loss the firm appointed a manager to oversee the operations.[653] This marked the firm's first experience of factory management.

Like Palmer and Co. before them, the decision to provide credit to the volatile indigo sector had resulted in the firm's 'accidental' integration into production. Indeed, this became a regular pattern, "numerous instances occurred where Gillanders, Arbuthnot and Co. lent money to enable the purchase of a factory to be made, in the hope of securing commissions on the sale of the indigo ... Frequently, Gillanders, Arbuthnot and Co. were forced to take over shares in factories in satisfaction of debts."[654] In this way the firm became involved with over 30 indigo concerns only divesting their final interest in 1906.

Initially Arbuthnot worried that this work was beyond the scope of the firm and he professed a strong desire to sell the indigo factory as soon as possible.[655] Whilst efforts were made to find a buyer the effects of the financial panic of 1847 began to be felt. As liquidity tightened in Calcutta the firm faced a run on its notes and bills when a false report said they had suspended payment.[656]

---

[651] GG2695, 1844 Agreement with Barlow Brothers for the advancement of funds to carry out the indigo seed business.
[652] GG 2714, 1873 Chancery Court Correspondence, 5th December 1846, Arbuthnot to Mackinlay.
[653] GG 2749, *The History of Gillanders.* 43.
[654] Ibid, 93.
[655] GG 2714, 1873 Chancery Court Correspondence, 23rd October 1847, Arbuthnot to Mackinlay.
[656] GG 2744, The diary of Mohendro Nath Mookerjee.

Disaster was averted but there was little hope of selling the indigo factory at anything like the price the partners wanted. The impact of the downturn was such that Arbuthnot abandoned his plans to retire, as the firm's capital was seriously reduced and there was little scope for a pay-out of his capital.

8.3.1 Managing an indigo factory

In this climate the partners took the decision to manage the factory directly and sought to make it profitable. Arbuthnot believed that the conditions created by the financial panic could actually support this strategy. First, he predicted that the crash would lead to a significant downturn in output, as many firms in Calcutta would cut their advances to the factories.[657] Second, the constriction of the credit market meant that the costs to remit funds through bills of exchange would rise, and secure access to indigo would enable the firm to make consignments to Britain in a cost-effective manner.[658]

Arbuthnot also identified the major risk now facing the firm, "We must keep in view that our capital is very much reduced … and not lose sight of the wisdom of keeping our capital floating."[659] The factory needed to be carefully managed to avoid locking-up capital in the venture.[660] It was decided that this could be best achieved through direct management of the operations.[661] One of the partners, Mackinlay, was entrusted with oversight of the operations. Arbuthnot's priority was that "we must trust to your exercising a vigilant control over the cost and charges of production, so that if there is no surplus there will at least be no additional loss."[662]

[657] GG 2714, 1873 Chancery Court Correspondence, 23rd October 1847, Arbuthnot to Mackinlay.
[658] GG 2750, A typescript for a booklet of the history of the firm, 1930. "To such a pitch did affairs come [in 1847] that the only method of sending remittances to England was by consigning produce or by buying bills from other persons."
[659] GG 2714, 1873 Chancery Court Correspondence, 23rd October 1847, Arbuthnot to Mackinlay.
[660] GG 2714, 1873 Chancery Court Correspondence, 6th November 1847, Arbuthnot to Mackinlay. One proposal to better control costs was to pay the peasants on delivery of the leaves rather than making advances.
[661] GG 2714, 1873 Chancery Court Correspondence, 23rd October 1847, Arbuthnot to Mackinlay. "I like your plan for a supervisor, for these indigo planters are, to many, unworthy of trust." The consensus was that the previous owner had defrauded them, and that to avoid such an outcome they needed to directly supervise the factory.
[662] GG 2714, 1873 Chancery Court Correspondence, 22nd December 1848, Arbuthnot to Mackinlay.

Overtime Mackinlay developed extensive knowledge and expertise of indigo production as he often visited the factories.

A highly experienced superintendent was also appointed at the factory. He was a competent manager which, according to Mackinlay, was a rarity as "good and experienced men are scarce in the district."[663] The partners sought to bind him to the firm. One option considered was to offer him a bonus based on output, although Arbuthnot was keen to make sure this was linked to revenue rather than production to avoid incentivising overproduction at the expense of quality. Another was to offer him a stake in the business and grant a profit share. In both cases these were only to be offered if he agreed to concentrate his efforts solely on this factory.[664]

8.3.2 Making indigo profitable

The importance of knowledge and expertise in production was revealed when a decline in the quality and subsequent prices achieved by the factory in 1859 was discovered. Mackinlay wrote, "The quality is I am sorry to say not what it should be ... On enquiry, I think that due intention has not been paid to the boiling and steeping."[665] He oversaw reinvestment in the factories' assets to improve the quality.[666]

Mackinlay's careful management of the factory saw it generate £16,000 of profits between 1851 and 1857, although there was significant year on year variation, from a loss of £200, to a profit of £6,000.[667] Various production figures were mentioned, but the average appears to have been above 500 maunds a year.[668] In 1871 the factory was recorded as a £17,900 asset on the balance sheet.[669] The success encouraged the firm to become more deeply involved in the sector.

---

[663] GG 2714, 1873 Chancery Court Correspondence, 2nd November 1859, Mackinlay to Gladstone.
[664] GG 2714, 1873 Chancery Court Correspondence, 22nd June 1852. Arbuthnot to Mackinlay. "If McLeod wants a share, I do not know that we should object, provided he pays for it, but if he wants it for nothing, or a simple entry to his debit, we cannot consent. If he has many other irons in the fire, and is merely a consulting physician, what he asks is too much."
[665] GG 2714, 1873 Chancery Court Correspondence, 2nd November 1859, Mackinlay to Gladstone.
[666] Ibid.
[667] GG 2714, 1873 Chancery Court Correspondence, 23rd December 1857, Murray Gladstone to Mackinlay.
[668] GG 2714, 1873 Chancery Court Correspondence, 21st October 1853, Murray Gladstone to Mackinlay.
[669] GG 2552, Ogilvy, Gillanders and Co. consolidated profit and loss accounts for 1872/73.

The partners did, though, continue to worry about the risks of capital lock-up associated with direct ownership. This encouraged consideration of different forms of ownership for the factories. One option was to follow Gisborne and Co. and organise a multiple-shareholder firm. In 1859 Mackinlay proposed that they combine various indigo interests into a single company which could then be floated to potential shareholders.[670] Alternatively, the firm could act as agent for indigo ventures, "carrying on factories for others as they do Pundoul, Rudcliffes, &co, the provision of funds being made for them, and they will get from this source all the information they now have about the prospects … with none of the risks."[671] The firm gradually took on various agency opportunities, but rather than diversify the risks through the multiple-shareholder model continued to absorb other factories to be managed directly.

The accounting for the factory reveals much about the partners thinking about this new business. Initially the losses incurred by the factory in 1847 were transferred to a suspense account to be reduced over time. This avoided these expenses being transferred to the firm's general profit and loss account and subsequently reducing the partners' profit share. Any surplus generated by the factories would pay down the suspense account.[672]

The partners argued about how they could extract benefit from the operation. In Britain they proposed that 10 per cent interest be charged on the money invested in the factory and credited to their individual accounts. Mackinlay pointed out that this would absorb much of the surplus generated and delay paying down the suspense account.[673] Eventually it was decided that each partner be classed as a proprietor in the factory, and any profits derived be split in the same shares as for the rest of the firm, once the costs and expenses had been paid down.[674] The capital invested in the factory was also regarded as an investment on which interest was charged.

[670] GG 2714 1873, Chancery Court Correspondence, 2nd November 1859, Mackinlay to Gladstone.
[671] GG 2714 1873, Chancery Court Correspondence, 6th October 1852, Arbuthnot to Mackinlay.
[672] GG 2714 1873, Chancery Court Correspondence, 23rd October 1847, Arbuthnot to Mackinlay.
[673] GG 2714 1873, Chancery Court Correspondence, 26th January 1852, Mackinlay to Arbuthnot.
[674] GG 2714 1873, Chancery Court Correspondence, 21st October 1853, Murray Gladstone to Mackinlay**.**

This became problematic when new partners joined the firm. The old partners believed that they had made the investments into the asset and paid down the debt at a cost to themselves. New partners did not pay down the costs but were potentially going to benefit from both shares of the profit and interest charged on the investment. Various solutions were discussed, but it was determined that the partners who had originally taken on the debt were deemed to be proprietors and would benefit from capital interest, whereas new partners would simply take on the profit share in relation to their position in the main firm.[675]

8.4 Expansion into tea

The profitability of the indigo factories encouraged the partners to consider extending their interests into other sectors. As the tea sector boomed in the early 1860s further opportunities to utilise their growing expertise in plantation management emerged. The threats of capital lock-up encouraged the partners to focus on agency opportunities. Their first contracts in the sector were signed in 1866, when they agreed to act as agent for the Golaghat Tea Estate and Teelwaree Tea Co.[676]

In 1895 the Siglo Tea Co., was incorporated in London. The firm amalgamated a number of tea gardens in Assam and sought to raise £300,000 capital. The prospectus named Gillanders and Co. as the Calcutta agents of the firm, and that they were "intimately associated with the management of the properties." Of the five directors, three were existing directors of the tea companies, whilst the other two were H.N.Gladstone and J.F.Ogilvy, partners at Gillanders and Co., showing that the firm or the partners personally, held shares in the venture.[677] The reputation and name of the firm and the various partners were widely use throughout the prospectus.

The memorandum of agreement stated that Siglo Tea Co.'s objects were, "to carry on the business of planters, growers, and manufacturers of tea, coffee, cinchona, cocoa, and other natural products of any kind, ship owners, bankers, engineers, and merchants in all their

[675] GG 2714, 1873 Chancery Court Correspondence, 6th September 1853, Murray Gladstone to Mackinlay.
[676] GG 2749, *The History of Gillanders,* 94.
[677] GG 2700, 1895 Siglo Tea Company, Prospectus and Share application.

branches, and any other business which can conveniently be carried on in connection with such businesses."[678] The production and trading activities were broadly in line with those specified by firms like the Assam Co., however, the memorandum also stated the company would seek to, "cultivate, manage, superintend estates and properties in India and elsewhere not belonging to the company … To lend or advance money to people on the security of plantations, growing crops, produce, bills of exchange … To establish or keep in the UK, India or elsewhere stores, shops and places for the sale of tea, coffee, cocoa, wholesale or retail."[679] The coordination of credit and management of other firms were activities associated with the trading firms and managing agents.

The scope of Gillanders and Co. involvement was contracted. The partners were appointed to be "attorneys and attorney jointly and each of them severally and the agents in Calcutta of the company." With these powers the partners were instructed to, "carry out and complete the purchase of other estates to the company and to carry on conduct and manage all the business and affairs of the company connected with the plantation and cultivation of the said tea estates." The key managerial tasks were, "to dispose of the produce thereof and to maintain and develop the said estates and property … and to supply all such stores implements and labour and all other necessaries for the purposes aforesaid … and to employ and dismiss all such managers, assistants, servants, coolies, labourers and others as may be necessary for the due cultivation management and carrying on of the said several tea estates and property."[680]

To undertake these activities they were empowered to, "make sign draw accept endorse discount and negotiate and bills of exchange bills of lading policies of insurance drafts orders cheques hoondies promissory notes or other negotiable instruments or securities whatsoever necessary for the due and proper management."[681] This gave the firm almost total control over the activities

[678] Ibid. These contracts often used the same clauses over many years. The relationship with Mr Kingsley, the owner of the Siglo Tea Co., had evolved since 1866 and the contracts of the 1890s would contain many of the same clauses to those of the original.
[679] Ibid.
[680] GG2700, Agreement between Gillanders, Arbuthnott and Co of Calcutta with the Siglo Tea Company to provide agency services 1895, revised copy of the agreement signed in 1921.
[681] Ibid.

in India. By controlling the supply of critical resources they oversaw both the day to day operations and the more long term strategic decisions relating to the management of the tea gardens.

In return for these services the firm was paid a commission of 2.5 per cent on the gross revenues of all tea and related produce sold or shipped for the Siglo Tea Co. A further 2.5 per cent on all the stores and equipment shipped from Europe. For each coolie recruited, Rs. 2.8. Finally an interest rate of 7 per cent per annum was levied on all credit advanced to the firm.[682] By the end of the 19th century this agreement was worth around £1,500 a year in fees.[683] The contract was signed for 15 years, after which it could be cancelled by either party with 12 months' notice.

Further contracts signed by Gillanders and Co. show the variable level of activities and control exerted on the firms they acted for. An agreement with the Borholla Assam Tea Co. Ltd., stated that, "for this company we are to act purely as forwarding agents … By way of remuneration we shall receive 1% only on gross sale proceeds of tea, 1% on the value of all stores purchased, whether in England or India, and Rs. 2 per adult coolie recruited." Whereas for the Rungmook Tea estate they were to, "act as agents for a period of five years. Office allowance of Rs. 1,000 per annum. To provide three quarterly reports and one annual report. Visits to the gardens by expert planters to be an additional charge. Usual handling charge which at present is 3 annas per chest. Commission on the proceeds of the crop sold in Calcutta 1.5%. Commission on the purchase of stores 2.5%. Out of pocket expenses."[684]

682 Ibid.
683 Ibid.
684 GG 2729, Agreements between Gillanders, Arbuthnot and Co. and Barlow Bros Co. Details the varying levels of involvement of Gillanders, Arbuthnot and Co. as agent for different tea estates.

8.4.1 Growing the agency business

In the established history of the firm it was the opening of the Suez Canal and the telegraph cable between London and Calcutta that profoundly changed the strategy of the firm. In 1876 Henry Neville Gladstone arrived in India and recognised that the old agency and consignment businesses would be fundamentally eroded by the changes in transport and communications. The search for new profits saw Gillanders significantly expand the breadth of its agency activities in the 1870s.[685]

Table 20. Agency agreements of Gillanders, Arbuthnot and Co.

Commission Agents	1830, Bass and Co. (Beer)	1839 Ruinart Pere et fils (Champagne)	1848 Cockburn and Campbell (Whisky)
Indigo	1844 Barlow and Co.	1847 Otter Factory	1844 - 1906 40+ Indigo factories
Insurance	1858 London Mutual Insurance Clubs		
Railways	1862 India Branch Railways	1882 Darjeeling Himalayas Railway Co Ltd.	
Tea	1866 Golaghat Tea Estate, Teelwaree Tea Co	1875 Siglo Tea Co.	1866 - 1910 30+ Tea gardens
Jute	1877 Balliaghatta Co.	1883 Hoogly Mill Co.	
Timber	1870 Burmah Co.		
Jute Cultivation	1873 Burmah Agricultural Co Ltd.		

Source: GG 2749, *The History of Gillanders.*

685 GG 2749, *The History of Gillanders*, 80.

This narrative seems to ignore the diverse set of agency activities already undertaken by the firm prior to 1870. As table 20 shows, the diversification and expansion of activities was well underway in the 1860s. Outside of the tea and indigo sectors by 1862 the firm became the financial agent of the Indian Branch Railway Co., for whom they managed the flow of resources and promoted and issued stock.[686] They were subsequently appointed as secretary and treasurer of the Darjeeling Himalaya Railway Co Ltd. As early as 1852 the firm opened a branch in Rangoon where, later, they bought a French owned forestry company, whose assets were subsequently used in an attempt to cultivate jute.[687] In 1877 they became managing agents for the Balliaghatta Co. Jute Mill, a sector in which they would become heavily involved in later years. In 1883 the partners agreed to build their own Jute Mill and launched the Hoogly Mill Company Ltd. to raise the capital for this venture.[688]

8.4.2 Organising the agency operations

To undertake the growing agency business the Calcutta office was organised into a number of business and administrative departments. The structure adopted by the partners in 1870 can be seen in table 21. The 'four white faces' proposed by Ogilvy to run the shipping and consignment trade in India had significantly expanded to oversee the agency activities. The 13 administrative, trading and agency departments were overseen by two senior partners, seven assistants, three banians and the various senior Indian writers.[689] There was also the management of the directly owned indigo factories undertaken by specialist managers.

---

[686] GG 2749, *The History of Gillanders*, 95. GG 2695 also contained some evidence of the firm's daily agency activity, with letters noting the receipt of monies from those applying for railway stocks, and the issue of receipts for 100 shares costing Rs. 1,000 in the Indian Branch Railways Company.

[687] GG 2749, *The History of Gillanders*, 71. The Burmah Agricultural Company Ltd. was founded to cultivate jute, a village was set-up and peasants were relocated from Tirhoot to undertake planting. Unfortunately two crops were washed out and the company was liquidated in 1875.

[688] GG 2750, A typescript for a booklet of the history of the firm, 1930. They built the mill in Chandernagore (French territory) and founded a firm with its head office in Paris with a view to securing preferential rates on French import duties. This ruse doesn't appear to have worked and eventually the head office was moved back to India.

[689] See the glossary for a definition of the banians.

Table 21. Departments and partners for Gillanders, Arbuthnot and Co. in 1870

Trade	Agency	Administrative	Partners	Assistants
Piece goods	Tea and Indigo	Correspondence and general	G.F.Mewburn	W.H.Hinde
Shipping	Insurance	Accountants	S.S.Gladstone	R.A.Turnbull
Exports	Timber	Despatching	J.F.Ogilvy	W.Hay
Produce	Mills (1885)		R.Gladstone	A.Butter
Account Sale (1871)			C.H. Moore	J.Thompson
Precious Stones (1870)			H.N. Gladstone	R.D.Smythe
Miscellaneous				L.Hernandez

Sources: GG 2749, *The History of Gillanders,* 101–104, lists the various departments, partners, assistants, senior writers and banians.

Each department was overseen by at least one Indian writer (senior clerk) and a European assistant (junior manager). The most senior Indian writers were employed in the key administrative departments of correspondence and accounting. Junior writers were employed as accountants, cashiers, cash keepers, parcel clerks, whilst Indians also managed the warehouses.[690] The banians acted as salesmen with the local community, both buying produce for export and selling the imported British goods in the bazaar. In 1870 there were 22 Indian writers and in the region of 100 other Indian workers employed by the company.[691]

The banians and senior writers often worked for decades with the firm and introduced relatives to build multi-generational dynasties. They could become very wealthy as they were able to undertake trade on their own account. Mohendro Nath mentioned one writer who was earning Rs. 6,000 (£600) per month from his trade investments; more than the assistants earned at the Assam Co. in a year. Susty Churn Dutt rose from being an assistant in the shipping department on Rs. 16 per month to be head of the department, in which time he made Rs. 100,000 (£10,000) from fees and investments in jute shares.

[690] GG 2744, The diary of Mohendro Nath Mookerjee, 1900.

[691] GG2695, an undated document, but amongst various other documents from the 1840s listed 73 Indian workers including writers, and others working in the cash department and warehouses. GG 2749, *The History of Gillanders,* noted that in 1891 147 Indian workers were with the firm, so an increase to somewhere in the region of a 100 by 1870 seems likely.

Due to their importance in these critical roles, the relationship between the European partners and the Indian writers and banians was close. Mackinlay in discussion with a writer said, "Why Baboo, you are not my servant, say you are an assistant to Gillanders Arbuthnot and Co. as I am."[692] The banians were legally contracted to the firm. A memorandum of agreement was signed in 1866 between the parties laying out the terms of their work. The banians were entrusted with a Del Credere account, to manage the bazaar sales and purchasing of products. The remuneration was based on the performance of the account, and they received 98 per cent of the balance once various costs were accounted for.[693] They also received a commission of 1.5 per cent on consignments of produce procured by them.

In Calcutta the European assistants managed the day to day affairs of the departments and oversaw the work of the writers. The senior partners provided guidance and held final decision-making rights. The partners rotated between the office in Calcutta and Britain. Some of the partners made multiple trips to India and built up extensive experience in the country, before finally retiring back to the UK. There were usually five partners in the firm, although this could fluctuate in years when senior partners retired and new ones were appointed.

The daily routine of the partners in Calcutta revolved around the coordination of an extensive correspondence, from both the different elements within the Gillanders and Co. network and geographically dispersed trading partners. The partners had to oversee the letters written by the assistants and Indian writers, whilst acting on the instructions and information from the network. Mackinlay discussed receiving 386 letters from within India, a further 386 pieces from Calcutta, and around a further 100 from the wider international network in a month.[694]

---

[692] GG 2744, The diary of Mohendro Nath Mookerjee, 1900.
[693] GG 2695, 1866 Memorandum of agreement between Gillanders, Arbuthnot and Co and Gobind Chund Doss, Kallydoss Seal, and Doyalchund Doss. A Del credere account saw the agent, in this case the banians, guarantee the surety of those with whom they did business through the account. In the occurrence of a client not paying the banians would make up the shortfall themselves.
[694] GG 2581, 1856 8th October, Mackinlay to Gladstone.

Most partners made a capital investment to join the firm, normally to the sum of £10,000.[695] It became common for a potential partner to join as an assistant, and advance to partner as a place opened up.[696] Other routes to partnership were also possible. Mackinlay was hired as an assistant but due to his growing importance to the firm was offered 10 per cent of the profits in lieu of a salary.[697] George Mewburn joined the firm as an apprentice in 1857 and worked his way up to be appointed full partner in 1871.[698] These partners were allowed to build a capital stake in the company through their annual profits, enabling the firm to take-on and promote talented individuals without funds.

The activities of the partners were agreed within the scope of the partnership agreement and in 1864 a new agreement was reached.[699] This was similar in structure to the earlier agreements, although there was a stated aim to raise the capital to £200,000 for which each partner was to contribute £40,000, to be raised from their existing invested capital and future profits. Two senior partners were confirmed as the ultimate source of authority, although business policy was still to be decided by a majority vote. If a partner was deemed to have put the assets of the firm at risk his individual partnership could be dissolved and he could be removed from the firm. A six month period of notice was required if a partner wished to retire and a period of three years was agreed for paying out capital.

[695] GG2695, 1840 Partnership agreement. George Gillanders and Adam Gladstone both joined with an investment of £10,000.
[696] GG 2749, *The History of Gillanders*, 31.
[697] Ibid, 42.
[698] George Mewburn was apprenticed to Adam Steuart Gladstone for 5 years. Sent to Calcutta in 1857, he rose to become a full partner in 1871, and in the same year was elected as a director of the Bank of Bengal, in 1880 he became a member of the Bengal legislative council.
[699] GG2716, The Partnership agreement of 1864.

Table 22. Gillanders, Arbuthnot and Co. partners profit share and retained capital in 1871

Partner	% of profits	Profit share (£)	Annual withdrawal (£)	Capital retained (£)	5% paid on capital (£)
Murray Gladstone	20	5,665	1,427	37,093	1,854
William Steuart	20	5,665	18,474	15,768	788
Steuart Gladstone	16	4,532	3,992	44,615	2,230
Robert Gladstone	16	4,532	2,996	11,386	569
George Mewburn	12	3,399	220	101	5
J Ogilvy				1,605	80

Source: GG 2552 Ogilvy, Gillanders and Co. consolidated profit and loss accounts for 1872/73.

In the 1872 financial report a total profit of £28,326 was recorded.[700] Each partner received a share of the profits and also 5 per cent interest on their retained capital in the firm. An annual withdrawal was allowed from the profits to cover a partner's living expenses; the rest was credited against the partner's retained capital. As table 22 shows the senior partner in 1870, Murray Gladstone, made £5,665 in profits, £1,854 on his retained capital and withdrew £1,427, giving him a personal profit of £6,092 in the year. This was added to his capital of £37,093.

The assistants tended to be contracted for five years, of which they would spend the whole period in India, building knowledge of the markets and products. They were remunerated with wages from around £200 to £400 per annum which increased over the course of the contract. Some were hired for specific roles such as book keeping whilst others were taken on for more general positions in the trading and agency departments.[701] This helped the firm to develop specialist expertise in the various areas it offered agency services. There was opportunity for progression and assistants, such as Mewburn, advanced to become a partner either at Gillanders or other similar firms.

The firm also hired specific experts to undertake key agency functions. The tea contracts mention the use of an agent to inspect the gardens regularly each year and to write reports on their

[700] GG 2552, Ogilvy, Gillanders and Co. consolidated profit and loss accounts for 1872/73.
[701] GG 2749, *The History of Gillanders*, 102, listed all the assistants hired by the firm and various contracts were mentioned in the text. GG 2744 The diary of Mohendro Nath Mookerjee, also discussed various assistants and their contracts.

condition and outlook. One letter also mentioned that the firm could dispatch a planting specialist to help an estate improve its processes.[702]

8.5 A balance achieved between capital, risk and the costs of agents

There were problems that emerged as the partnership expanded its activities. In 1863 Mackinlay returned from India after a successful spell. He had fallen out irrevocably with another partner, William McAdam Steuart, and on his return resigned from the partnership.[703] As he had not become a senior partner no new partnership agreement had been drawn up and Mackinlay rejected the claim that he was bound by the existing agreement. Having co-signed deeds for both the firm's new offices in Calcutta and various indigo factories he refused to re-convey his claims back to the firm unless his asking price was met. The remaining partners felt this price was too high and were forced to go through arbitration and ultimately to the Chancery court in London.[704] The case was finally settled in favour of the firm in 1873, with re-conveyance forced at a set price.[705] However, in the intervening period, the firm was unable to sell the assets.

The company returned to the chancery court only two years later. William McAdam Steuart, the partner whose behaviour had infuriated Mackinlay proved so unsuitable that the others sought to remove him from the company. He was so unsuccessful in his time in India that he was recalled to the UK, an order he refused to obey, and a senior partner had to be despatched to force him to give up his position.[706] As shown in table 22, he also dramatically breached the partnership agreement removing £18,000 of capital in a single year. He was removed from the

[702] GG 2729, Agreements between Gillanders, Arbuthnot and Co. and Barlow Bros Co., mentioned the role of the inspector, Mr Elliot, and expert planters to be sent to the gardens at an extra charge.
[703] GG2581, 8th October 1856 Steuart to Mackinlay, 6th January 1857, Mackinlay to Steuart, 9th January 1857, Mackinlay to Gladstone, this lengthy correspondence laid out the disagreement between Mackinlay and William McAdam Steuart, and the decision to recall Steuart to Britain.
[704] GG 2714, 1873 Correspondence in the Chancery Court, 16th November 1862, Murray Gladstone to Mackinlay.
[705] GG 2714, a clipped but undated newspaper article detailed the judgement. The judge settled in favour of the firm, saying that Mackinlay had entered the firm on the understanding he was bound by the agreements under which they operated. Clause 16 of the 1840 partnership agreement clarified that all assets be valued and an agreed share be paid to the partner when he quit, therefore Mackinlay had no legal rights to the property on exiting the partnership.
[706] GG 2749, *The History of Gillanders*, 46-47. The partners in Britain revoked William Steuart's power of attorney, legally voiding any decisions or contracts signed by him.

firm in 1875, but only after he had taken the other partners to court claiming wrongful dismissal. The difficulties and expense incurred in removing him were high, not least because he had forced Mackinlay to exit the firm in such depressing circumstances.

The correspondence entered as evidence in both disputes revealed extensive arguments between the partners on various issues. In both cases there were disputes about the formula used to determine commission from sales and assign value to goodwill built up in the firm during the partners' tenure.[707] The difficulty in assigning ownership and valuing fixed assets emerged in debates over the indigo factories. The decision to assign shares of ownership for separate assets to partners who had invested capital at the time, and subsequently signed the leases, made it imperative to find an efficient mechanism with which to buy-out retiring partners. However, Mackinlay's intransigence and the inability to find an agreeable valuation saw the case forced to law.

The situation was greatly exacerbated by Mackinlay not formally signing a partnership agreement, and the discussion between the partners in signing the 1864 agreement specifically sought to avoid these problems.[708] Nevertheless, both cases resulted in expensive, time consuming court trials that could, potentially, have resulted in far more damaging outcomes for the firm.[709]

In spite of these difficulties the firm successfully managed the expansion of activities and investments into a number of significant fixed assets throughout the 1850s. The directly owned indigo factories, source of such worry in the 1840s, had been turned into a profitable investment. In 1862 the assets of the factory were valued at Rs. 180,000 (£18,000), with the factory and land

---

[707] GG 2714, 1873 Chancery Court Correspondence, 21st January 1864. Mackinlay disputed the recent accounts, claiming the other partners had failed to follow established protocols in losses which he believed were not his to bare.

[708] GG2716, The Partnership agreement of 1864. "The value of a large part of the property and assets was not really ascertained and in respect to parts thereof any sums expended thereon or the original nominal value thereof was inserted for the purpose of estimating and dividing or appropriating the annual profit and loss and no valuation was taken of the goodwill."

[709] The inability to sell or make investments into the indigo factories could have seriously impeded the flexibility and decision making of the partners, opening the possibility for significant losses.

Rs. 160,000 (£16,000) and the crop Rs. 20,000 (£2,000). The office and warehouses in Calcutta, purchased in 1844 were valued at Rs. 110,000 (£11,000).[710]

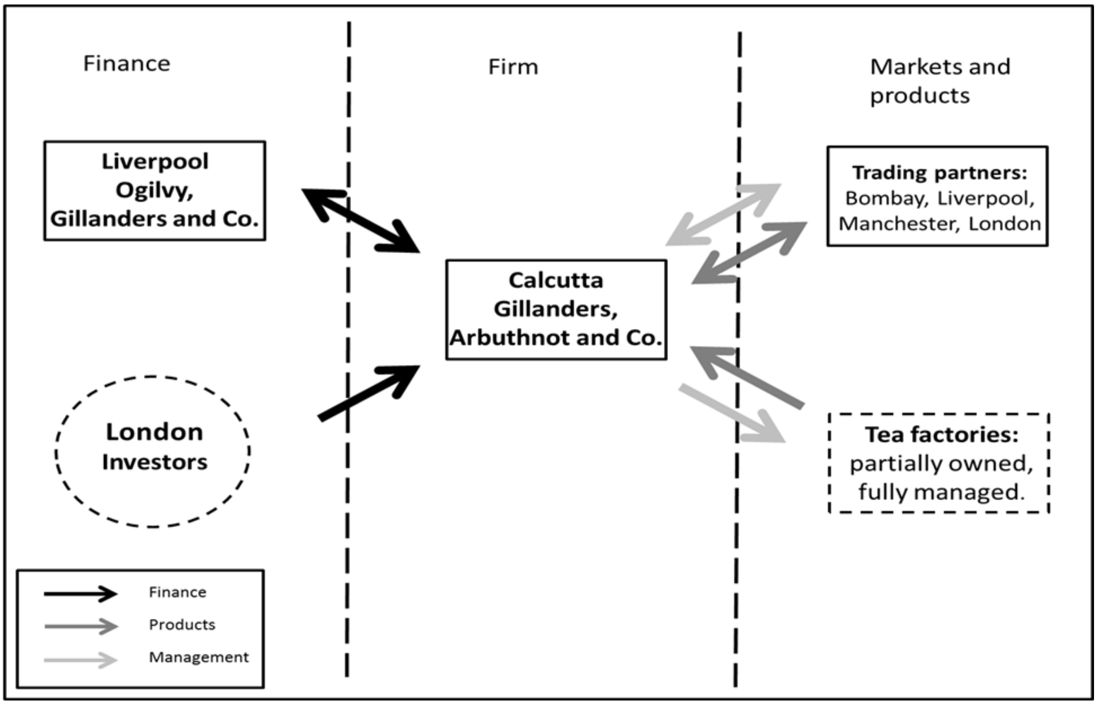

Figure 31. The organisation of Ogilvy, Gillanders And Co.
Source: GG 2749, *The History of Gillanders.*
Note: See figure 12 notes for details of the legend.

Throughout the 1860s the firm significantly changed its business model and organisation. The move away from the commission trade towards the increasingly profitable opportunities in local industries was accompanied by efforts to find mechanisms that diversified the risk, leading to experimentation with the managing agency model. In this way, as figure 31 shows, the boundaries of the firm were extended, from the network of the partnership, to now include a network of interests in the various managed firms.

710 GG 2714, 1873 Chancery Court Correspondence, Memorandum drawn up by the partners in 1862 to confirm the state of the company on Mackinlay's retirement.

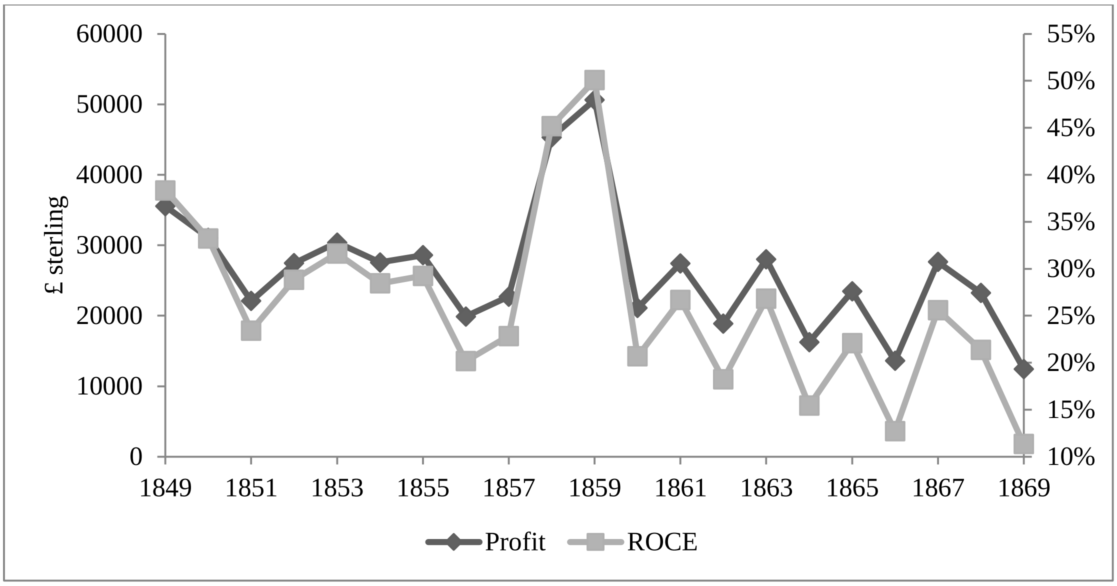

Figure 32. Consolidated profit and loss of Gillanders, Arbuthnot and Co., 1849 to 1869.
Source: GG2550 Statement for income tax returns 1849–1850 to 1869–1870, reporting profit and loss balances for Ogilvy, Gillanders and Co., Gillanders, Arbuthnot and Co. and including profits and losses from linked firms.
Notes: The values are real and have deflated using the CPI index in Feinstein 'Pessimism perpetuated.' The ROCE was calculated using the profit above, the capital was estimated based on the figure of £85,000 in 1840, and the 1871 figure of £110,500, with increments added each year.

The managing agent system allowed the firm to diversify and grow into a wide range of industries, including railways, tea and jute, that had high capital intensity. The system allowed investment to take place, but in a way that avoided the lock-up of Gillander's own capital, and allowed the partners to exploit their managerial capabilities to good advantage. The firm remained profitable over the entire period as shown in figure 32, with a mean average profit of £26,475 per year. It also provided some excellent returns to the individual partners, most of who returned to England and retired with substantial capital, alongside the generous yearly allowances. The ROCE averaged 26 per cent between 1849 and 1869, and although the variation was substantial, a high of 50 per cent and a low of 10 per cent, it was always higher than that achieved by the Assam Co.

Having survived the traumas of the 1830s and 1847, the partners were able to manage the transition of business model. This was followed by a period of moderate decline, "the fortunes of the house were lowest about the middle of the [18] seventies."[711] However, the reforms saw the firm established as one of the leading managing agencies by the end of the 19th century. Indeed the firm survived well into the 20th century, and although undergoing significant changes certain parts originally founded by Ogilvy, Gillanders and Co. continue to operate to this day.

8.6 A hybrid of ownership forms to manage multiple transactions

Founded as a commission and shipping agent, the firm had followed the well-worn path trodden by Palmer and Co. and Gisborne and Co. in establishing a network of linked partners and trading associates. They successfully negotiated the alignment of credit and information required to undertake trade, but followed many of their contemporaries into a process of 'accidental' integration in the indigo sector. The takeover of the indigo factory was a decision that vexed the partners for many years, forced on them by the downturn of 1847. The decision to integrate into production increased need for capital, and called for different systems of coordination.

This stirred interest in finding ways to balance the pressures and risks faced by the firm through its increasingly diverse activities. In particular, the need to ensure financial flexibility that would allow the firm to pursue profitable opportunities in emerging industries that required capital investment, without locking-up to much of the firm's own capital. The integration also forced the partners to consider how to maintain the flows of finance and information within the expanded operations of the firm, whilst developing knowledge and information sharing systems that improved control over production. These challenges were encapsulated in the tea sector in the 1860s, where the experiences of the Assam Co. had highlighted the difficulties in achieving this balance.

By the 1850s the partners had considered a range of governance mechanisms to manage similar transactions. The various agreements linking the firm's activities in Calcutta, Liverpool, Bombay and Manchester had enabled the geographic expansion of the firm, integrating the processes for sharing credit, information and knowledge. Various other agency contracts had

[711] GG 2750, A typescript for a booklet of the history of the firm, 1930.

provided differing levels of integration with firms in a range of sectors, to build knowledge and access to resources. In the transactions for capital the firm faced the established problems of the Calcutta finance markets, whilst recognising that reliance on internally generated capital through the partnership was limiting. The partners were well aware of the joint-stock form, and its potential for organising activities with high fixed capital requirements.

On what grounds then, did the partners choose to utilise these different options to manage these transactions in the emerging local industries in the 1850s and 1860s? The joint-stock or multiple-shareholder form was discussed as a possibility for the indigo factories. Gisborne and Co. had shown the benefits of combining factories into a single corporate entity to deepen capital reserves and diversify the risk of the investments.[712] Integration of production was also attractive in terms of the control it offered, and avoidance of hold-up. However, as the experience of the Assam Co. showed, the joint-stock form had distinct trade-offs; the entrepreneurs saw the benefits, yet by the 1860s many were painfully aware of the down sides. The costs of agency due to the separation of owners and managers were high, particularly for firms with geographically distributed operations, which predominated in the tea sector. This encouraged effort to find mechanisms that mitigated the problems of agency.

The partnership form had significant limitations in its capacity to internally generate sufficient capital in a sustainable manner to undertake such investments. Efforts to broaden these capacities, through the construction of networks of partners and business associates, whilst enabling a greater degree of scale, left the firms increasingly exposed to hold-up and opportunism.[713]

However, the networks linked by partnership agreements had various strengths. The network improved capacity to coordinate flows of finance and information from diverse sources. As

[712] Chapter 5.4 details Gisborne and Co.'s use of the privately owned multiple-shareholder form to manage their indigo activities. That both firms explored this possibility signify it was an increasingly attractive option in the 1850s.
[713] See chapter 4.6 and 4.7, for the discussion on the hold-up risks faced by Palmer and Co. through the use of bi-lateral partnerships.

Mackinlay's discussion of the work in Calcutta illustrated, the partners were well versed in managing large flows of information. The network also enabled the firm to raise credit and capital from private and public channels. The improvements in the Calcutta finance markets and access to those in London meant the firm acted as a conduit for credit rather than a source like Palmer and Co. Ensuring the flow of credit and, particularly capital, from the financial markets of London to the investment opportunities in Bengal, called for skilled management, underpinned by experience, knowledge and access to information. These capabilities were well-formed in the trading partnerships.

The correspondence showed that the appointment and immersion of partners such as Mackinlay allowed the firm to build expertise and develop a robust system for sharing information about the indigo market and production processes. This capacity was evidenced by Mackinlay's changes to the production process to improve quality and prices. The network when coupled with the hierarchical management structure in the indigo factories, gave great breadth and depth for sharing information and creating knowledge.

The managing agency model allowed firms to utilise the joint-stock form to raise capital for fixed investments, lowering the transaction costs for capital, and gaining the benefits from integrating operations. Retaining the partnership and network structure lowered the transaction costs for information. This allowed the firm to undertake a range of activities with a degree of flexibility, as they could expand or contract the network into different business areas.

8.7 The importance of the partnership in aligning diverse interests

The key to the success of the managing agent system was the continued use of the partnership form. This better allowed the alignment of the interests within the firm and capacity to attract and retain well-qualified individuals. These features alleviated the costs of agency experienced in the joint-stock form. Entering the partnership required investment, and in return offered a remuneration package that included a percentage of profits. On joining partners invested between £10,000 and £20,000, whilst those who joined as salaried partners or assistants used their profits to build a capital stake in the firm. It also became increasingly common for the firm to take on a potential partner as an assistant, with the possibility of a partnership on the successful completion of the contract. This ensured that all the partners made a significant investment of both capital and time into the firm.

The assistants joined the firm on a five year contract, which included a gradated increase in wages from £200 to £400 per annum over the term of the contract. These conditions were very similar to those of the assistants at the Assam Co., yet the future rewards of becoming a partner far outstripped the possible incentives available in the tea companies. There was a more defined career path, as assistants could graduate to become a partner at either Gillanders and Co. or other similar firms.[714] As George Mewburn demonstrated, it was possible work up from the bottom of the firm. This encouraged assistants to commit to the firm, whilst allowing the partners to be selective in admitting new members.

The difference in remuneration and the incentives between the partners at Gillanders and Co. and the managers of the Assam Co. were significant. A superintendent could possibly expect a wage of £750 to £1,000 per annum, with a small bonus from the profits.[715] The potential returns for the partners were far greater. In 1834 Thomas Ogilvy referred to his normal annual profit of £2,000. By 1872 Murray Gladstone made £5,665 as his share of the profit and £1,854 interest on his capital.

The improved incentives and alignment mechanisms were not restricted to the European staff. The banians were legally contracted to the firm and the use of the Del Credere account to manage the bazaar sales offered a good incentive and effective enforcement mechanism to align their interests. The banians stood surety on the sales in case of default ensuring they managed the

[714] GG 2749, *The History of Gillanders*, 102. Mackay joined as assistant in 1854 and made partner in 1860, in 1848 Anderson joined as an assistant, and became partner at Mackenzie, Lyall and Co. in 1854, whilst Murdoch moved from being assistant at Gillanders to partner at Ewing and Co. after five years.
[715] Chapter 7.4.1 details the salaries and incentives available to the managers in the Assam Co.

sales carefully. In return they were offered the incentive of 98 per cent of the balance of the account.[716]

The relationship between the firm and other Indian workers were often deep and long lasting. Mohendro Nath Mookerjee's diary may well have been written to flatter the partners, possibly in the hope of an improved pension, but it does, along with various letters, point to a mutually committed relationship between the European partners and Indian writers.[717] Letters written between the writers and the partners showed the capacity of the Indian staff to pursue their own business interests, through which some became extremely wealthy. They also show that the relationships throughout the firm were built on sufficient trust that loans could be agreed.[718]

These mechanisms tied agents to the long-term interests of the firm. The level of capital investment ensured that each partner had plenty of 'skin in the game'. Likewise the Indian work force was also aligned with various incentives to work for the long-term benefit of the firm. The risks of opportunism and malfeasant behaviour were curtailed, enabling the partners and assistants to work at distance from each other, and to trust the decisions made by agents working for the firm. Conversely, managers at the Assam Co. had no capital invested, nor strong enough incentives to restrain them from seeking private benefits through opportunistic actions. This refined and improved the dual-board structure of the Assam Co., as the incentives and bonding mechanisms ensured that those with decision rights in India were equally vested in the ownership and control of the company.

A similar balance of interests was achieved between the agents and the firms they represented. The mixed remuneration packages, with a guaranteed fixed annual fee and commission payments, ensured the agent was not over exposed to the results of a single season, but incentivised the thorough application of their expertise and capabilities to maximise their share

---

[716] GG 2695, 1866 Memorandum of agreement between Gillanders, Arbuthnot and Co and Gobind Chund Doss, Kallydoss Seal, and Doyalchund Doss.
[717] GG 2744, *The diary of Mohendro Nath Mookerjee*.
[718] GG2708, 1854 December, Letter to Mackinlay from Kadernauth Chaudry. The writer asked for a loan to cover extensive losses he had incurred on a tobacco trade, promising repayment from his salary.

of the profits. The interlocking directorate arrangements particularly with the Siglo Tea Co. improved monitoring for both parties and enabled rapid decision making. The bonding between the firms was further improved by monitoring mechanisms such as the sharing of accounts that reduced information asymmetries. This gave the partners opportunity to monitor dispersed activities in Britain and India.[719]

8.7.1 Hiring, knowledge and expertise

The improved incentives allowed Gillanders and Co. to avoid the 'market for lemons' hiring scenario that afflicted the Assam Co.[720] Due to the potential rewards of partnership the firm could hire and retain the best talent available. Although there was a strong reliance on hiring from within the families of the founders, with a preponderance of Gladstones, and multiple generations of Ogilvies and Gillanders, the firm was also able to attract successful individuals from outside this group. Individuals that played significant roles in developing the firm such as Arbuthnot, Mackinlay, Mewburn, and Ewart all came from outside the core family groups. Mackinlay's career development, from Scottish trained lawyer to Indian indigo expert, was a good example of the firm's ability to attract capable individuals able to develop knowledge and expertise.

Regular rotation of the partners between Britain and India helped to build and share knowledge of the markets and products, ensuring all partners in each part of the firm were well versed in the parameters of the decisions they needed to make, unlike the inexperienced London board of the Assam Co. The firm developed knowledge and expertise for undertaking a wide range of work and was a significant advantage over newly founded ventures with owners inexperienced in business in India.

Various partners, however, pointed to problems within the hiring process. John Gladstone wrote, "During my time in Calcutta little care was taken in the selection of the young Englishmen who

[719] GG 2552, Ogilvy, Gillanders and Co. partnership accounts for 1871 to 1878.
[720] Chapter 7.8 discusses the recruitment problems faced by the Assam Co.

proceeded to India to carry on the business, and it was not till the [18] nineties that any improvement in this respect took place."[721] Mackinlay complained that rather than appoint the best and most deserving candidates to partner, favours were instead granted to family members.[722] A problem reinforced by the retention of William McAdam Steuart in the face of mounting evidence of his incompetence. Despite these issues the combination of hiring better quality managers, and capacity to generate, circulate and use the knowledge within the partnership were advantageous capabilities.

8.7.2 Flexibility of the partnership form

The partnership agreement gave the firm great flexibility. It offered the partners the capacity to change the levels of incentives, monitoring and enforcement that governed their relationships.[723] This allowed them to respond quickly to changing circumstances and align their interests in different ways. In comparison it took the directors of the Assam Co. lengthy periods of time to change the conditions of employment, often requiring a vote at the AGM and recourse to their solicitors.[724]

This flexibility lowered the effects of minority oppression, as the partners had mechanisms that could adjust their interests within the firm. The constant tinkering with the profit shares shows this mechanism in action. It also allowed decision making rights to be clarified. The appointment of a senior partner with ultimate responsibility, and a set of dispute mechanisms that defined authority, avoided the messy, ill-defined, decision making that crippled the Assam Co. but also

---

[721] GG 2750, A typescript for a booklet of the history of the firm, 1930. Gladstone did go on to indicate that good hiring and retention was important, "Much of the firm's prosperity since has been due to the weeding out medium and inferior young men, and pushing on the most promising."
[722] GG 2714, 1873 Correspondence in the Chancery Court, 8th January 1860 Mackinlay to Murray Gladstone. "The only advantage J.Ogilvy has is being your near relation, and I quite admire the feeling of affection which makes you so steadfastly endeavour to push him and your other relatives forward."
[723] GG 2749, *The History of Gillanders*, 99–102, this flexibility allowed the firm to make 6 partnership agreements and the various agreements with Ewart and Latham over this period.
[724] Chapter 7.4 and 7.5 show the problems faced by the Assam Co. in changing the conditions of employment.

gave partners the opportunity to voice dissent. The legal transference of the powers of attorney to the different partners' who left for India further clarified their roles and responsibilities.[725]

The flexibility of the partnership agreements also allowed the firm to expand or contract the operations. Between 1825 and 1871 18 partners and 27 assistants who did not become partners joined the firm.[726] This allowed the firm to increase in scale and expand the trading operations through the ventures in Bombay and Manchester, and subsequently undertake the agency activities by taking on partners and employing specialists. Like Gisborne and Co. the firm had five partners most of the time. This made them larger than average but appears to have been a sustainable size in terms of controlling diverse interests.[727]

Similarly, the contracts in the tea sector showed the flexibility of the managing agent system. Gillanders and Co. had varying degrees of control over the contracting firms. In the case of the Siglo Tea Co. this was significant, with extensive powers of attorney turned over to the partners, though, for other firms this was greatly reduced. The contracts also showed the range of services offered and accepted; from the provision of reporting, monitoring, and enforcement functions, to ensuring the flow of products and resources, and support in promoting stock. This allowed the partners to leverage their own capabilities whilst building knowledge and expertise in a sector without over-committing resources.

8.7.3 A coda to the benefits of partnership

If the partnership form lowered the costs of agency so effectively, it is worth questioning why all firms did not adopt or revert back to the form in the 1870s. It was cheap and the contracting

---

[725] GG 2714, 1873 Correspondence in the Chancery Court, Agreement granting rights of attorney to Mackinlay in Calcutta. "True and lawful attorney for us and each of us to do and perform all and singular the matters relating to our said partners at Calcutta in the same manner as if either of us, or both of us, were then present to perform the said matters, or specially to prevent William McAdam Steuart, our junior partner there, from acting in any way in opposition to the said David Mackinlay in the conduct of matters entrusted to the said firm."
[726] GG 2749, *The History of Gillanders*, 99–102.
[727] Chapter 4.7 discusses the difficulty Palmer and Co. faced with coordinating 7 partners. Similarly table 8, p.92, table 9, p.94, showed the instability amongst the firms with a higher than average numbers of partners. Experimentation had helped firms such as Gillanders and Co. to find a more optimised blend of size and incentives to bond members together.

between the partners enabled great flexibility. An obvious repost would be the need for deep capital reserves to undertake the fixed investments, yet the larger partnerships such as Gillanders and Co. could feasibly generate levels of capital to undertake these activities.[728] Although the partnership gave flexibility, the nature of the agreements raised problems for the firm.

The disputes arising between Mackinlay, William McAdam Steuart and the other partners highlighted the different interpretations that could be made of the agreements. Mackinlay felt the decision making powers vested in the senior partner was unbalanced and needed changing, "There cannot be much harm in allowing something like despotic powers to such as senior as G C A (Arbuthnot), and as you have proved so far; but not having the same confidence in others it will be desirable to have the position and share of the profit of each partner defined, and the rules for conducting our business embodied in article of co-partnery in the usual way."[729] The failure to sign a new agreement with these partners after 1840 exacerbated these disagreements.

The disputes showed the difficulties in enforcing policies relating to the valuation of assets and the distribution of profits that were acceptable to all partners. The refusal of Mackinlay and William Steaurt to accept the decisions made by the other partners left the firm in a difficult situation. There was little they could do to enforce the decision other than going to law. There were further issues in defining the responsibilities within the interlinked partnership arrangements with Ewart and Latham, where the rights and responsibilities of the various parties were rather opaque.[730]

The partners were forced to find lengthy and costly legal resolutions to the major disputes they faced in the 1860s. However, it was notable that Gillanders and Co. was victorious in both cases and ultimately able to enforce the terms of the partnership agreement. This stood in stark contrast

[728] In 1872 Ogilvy, Gillanders and Co. had capital of over £100,000, bigger than many of the smaller joint-stock tea companies referenced in chapter 6.6.
[729] GG 2714, 1873 Correspondence in the Chancery Court, 31st January 1860 Mackinlay to Adam Gladstone.
[730] GG 2713, 1871 Case for opinion of council regarding the arrangements between Ogilvy, Gillanders and Co., Arbuthnot, Gillanders and Co. and Ewart, Latham and Co. of Bombay regarding the arrangements in Bombay and Manchester.

to the repeated failure of the Assam Co. to enforce either its employment contracts, or the clauses of its memorandum of association in the Calcutta courts.[731]

Perhaps the most significant problem with the partnership form related to the long-term management of fixed assets. The rising costs of investing and maintaining fixed assets, and the potential losses should the firm be forced to sell them, increased the costs of untimely dissolution.[732] Mackinlay's decision not to re-convey his rights to the indigo factories created a lengthy delay of over ten years, before the partners could finally take full control of the assets. The inability to secure the property rights of the assets amongst the various partners was further complicated as partners entered and exited the firm. Conversely the joint-stock form offered a simple mechanism to manage the transference of these property rights through the transference of shares, significantly reducing the threat and costs of untimely dissolution.[733]

8.8 Flexible boundaries of the firm

The challenge of establishing new industries in Bengal presented entrepreneurs with a dilemma. The growing capital requirements and management of fixed assets in sectors such as tea incentivised the widespread adoption of the joint-stock form. Yet, directors and managers had proved difficult to control. In the face of rampant opportunism and poor decision making the joint-stock form was ill-equipped to provide solutions for these agency problems.

The partners at Gillanders and Co. needed to find an organisational form that lowered the transaction costs for capital, but also those for information; likewise, balance the threats of opportunism against those of untimely dissolution. The solution that emerged to overcome these constraints was the hybrid form of ownership embedded in the managing agent system. The

[731] Chapter 7.4.1 showed the failed efforts of the Assam Co. to enforce the clauses of the employment contracts in court.
[732] The firm would have made significant losses at various points, depending on the conditions in the indigo market, if forced to sell the factories, or if the partnership had been dissolved.
[733] GG 2714, 1873 Correspondence in the Chancery Court, 16th June 1863, Murray Gladstone to Mackinlay.

structure and governance of which potentially allowed them to exploit the advantages of the joint-stock form whilst retaining the partnership as an organising principal.

The case of Gillanders and Co. showed the evolution of the system as the firm transitioned from commission traders, to indigo factory owners in the 1840s and 1850s, and subsequently a managing agent for tea and railway firms from the early 1860s. Gillanders and Co. was amongst the rapidly expanding number of firms' experimenting with such contracts that saw the system well-established before 1870 in a range of sectors.[734] The firm was able to expand into new industries successfully, remaining profitable each year with an average ROCE of 26 per cent, a markedly superior result to the Assam Co.

The literature proposes various rationales for the emergence and proliferation of the managing agents. Chapman rejected the notion that the managing agents provided agency services, but this claim was misguided for the period up to 1870.[735] The distinct managerial problems faced by the Assam Co. and the appointment of an agent to rectify them, when coupled with the contracts signed between Gillanders and Co. and various tea firms, clearly point to the importance of the provision of agency services. The more pertinent question is then, what problems were the managing agents solving and why were they more successful than other forms of organisation at solving them?

Lokanthan proposed the role of the managing agent was as a supplier of finance and human capital, overcoming the thinness of both markets in Calcutta.[736] The chapter provides a degree of support for this explanation. The contracts in the tea sector highlight the importance of coordinating the flow of credit and managerial resources. Gillanders and Co. was able to leverage its network to access these resources in Britain. However, the Assam Co. could access

[734] It was notable that Gillanders and Co. use of the form predated the firm's own official history, GG 2749, *The History of Gillanders,* in which the change in organisation and strategy was described as a function of the transport and communication revolution of the 1870s. Jones, *Merchants to multinationals,* and Chapman, *Merchant Enterprise,* acknowledge that the form was active from the 1830s, but it was notable that the rapid proliferation in the number of agents and contracted firms between 1858 and 1868 occurred before their ascribed turning point of 1870 as well.
[735] Chapman, "British Free-Standing Companies."
[736] Lokanathan, *Industrial organisation.*

capital in the London market equally well; floating shares on the London market and selling shares in Calcutta. The increasing number of joint-stock banks in Calcutta and lowering rates of interest for short-term credit, also lowered the advantage of the incumbent agency firms.[737] The stand-alone joint-stock firms potentially offered as much scope to access and channel financial resources as a managing agent.[738]

In the provision of human capital there was though scope for the managing agents to obtain a significant advantage. Due to the underpowered incentives relative to the partnerships the joint-stock firms clearly came of worst. The superintendent of the Assam Co. could earn £750 per annum, whilst the senior partners at Gillanders and Co. could make over £5,000 per annum. The assistants and banians also had better incentives in the partnership. That the managing agents were able to attract and channel talent, from both Britain and India, enabled them to build and retain knowledge more effectively than joint-stock firms.[739]

The network of partners provided a more sustainable and adaptable governance mechanisms than the dual-board structure of the Assam Co. The partners in Calcutta could make decisions rapidly, adapting to the market conditions, whilst the bonding of the partnership reduced the agency costs of operating at distance. Such adaptability allowed them to experiment with integration of production in indigo and tea; the boundaries of the firm could extend or contract rapidly. Overtime the firm developed significant expertise in the management of different production processes. The travails of the Assam Co., showed the distinct difficulties in establishing and managing such systems.

[737] Chapman, “British Free-Standing Companies.” There was, though, the suggestion that the firm was less successful at managing local credit. This provides some support to Chapman’s claim that the managing agents were successful due to their capacity to control local networks and resources.
[738] As described by Wilkins and Schröter, *The Free-Standing Company*. However, the prospectus of the Siglo Tea Co. did make much of Gillanders and Co. attachment to the venture as agent, indicating that the reputation of the managing agent, embodied in its partners, was an important component in the success of the share issue and raising capital as noted by Akerlof, “Market for lemons.”
[739] Misra, *Business, Race, and Politics in British India*. The sources suggest that the racist attitudes of the European partners, identified by Misra, were possibly less prevalent than those encountered in the early 20th century.

As Roy and Casson proposed, the key benefits of the managing agency system were flexibility and diversification of risk.[740] In the face of volatile and uncertain markets, particularly in emerging industries, the porous boundaries created by the managing agency contracts gave great flexibility to both investors and managers. Misra noted that "it was this manoeuvrability, guaranteed by the partners' control and autonomy, which was most prized by the managing agents," yet went on to claim that the "central concern seems to have been to preserve their control over their businesses, to increase their status within colonial society."[741] Chapman read this need for control as a self-interested effort by the partners to protect their interests from shareholders.[742] The evidence in this chapter would certainly support the first claim, but the rationale for control and on-going use of the partnership form, certainly prior to 1870, was motivated by the need to control agents and manage operations at distance.

There are significant limits to the generalizability of these findings. The tea sector experienced a widespread adoption of the joint-stock form, and subsequent rapid increase in the activities of managing agents, earlier than other sectors. That the managing agent form proliferated elsewhere is clear, but the rationale for the timing and sequence of events in the tea sector may be highly specific, and overstate the importance of the agency explanation. The significant differences between the contracts in the tea sector alone, suggest that the rationale for the role of the managing agents may well have differed between sectors.

The explanation is further limited by the difficulty in distinguishing the nature of the relationships between the managing agents and contracted firms. The findings of the Assam Co. reflect a joint-stock firm seeking an agent to resolve problems, whereas Chapman proposes the managing agents were the instigators in launching joint-stock firms; potentially, a very different rationale underpinned the system, and it is hard to untangle which was dominant in this period.[743]

---

[740] Roy, *Economic History of India,* Casson, "An economic theory of the Free-Standing company."
[741] Misra, *Business, Race, and Politics in British India,* 5-7.
[742] Chapman, *Merchant Enterprise.*
[743] Chapter 6.7, there were other firms that followed the path of the Assam Co. in the tea sector but there is no conclusive evidence either way.

This explanation best captures the experience of the managing agents Roy described as "born from trade" which dominated Calcutta.[744] The managing agents in the tea sector leveraged the benefits of the joint-stock to reduce transaction costs for capital and the threats of untimely dissolution, but most importantly lowered costs of opportunism. The weakness of the governance of the joint-stock form in aligning interests of dispersed owners and agents limited the scope of its employment as a stand-alone entity, resulting in the expansion and persistence of the managing agent form.

[744] Roy, "Trading firms in Colonial India," 29.

Chapter 9 Conclusion

The rescinding of the EIC's monopoly in 1813 opened the Anglo-Indian trade, allowing private merchants to freely enter the market. However, the exit of the EIC required the reorganisation of the markets and systems of trade, previously under the custodianship of the company. The thesis has sought to identify how entrepreneurs operating in Calcutta after 1813 responded to these challenges through the use of different business forms.

To investigate these changes the thesis sought to answer three questions:

I. How did the ownership, organisational structures and governance arrangements of Anglo-Indian trading firms change between 1813 and 1870, and did one or other form proliferate?
II. Why were certain forms of ownership and organisation preferred, and which factors determined an entrepreneur's choice of form?
III. Did the choice of ownership and governance affect the performance of the firms?

The thesis drew on three groups of sources to identify and analyse changes in the firms. First, a new data-set of trading firms was constructed from Calcutta business registers. The data quantified change in the number of firms, form of ownership, and various organisational features. This highlighted the relative proliferation and decline of four different firm types over the period. Second, the environment in which the firms operated was described using commodity chain analysis of key trade products, indigo and tea. This revealed changes in the structure of the markets in Calcutta, and identified the main transactions undertaken by the firms. Third, case studies showed the various contracts and governance mechanisms used by entrepreneurs to structure the organisation and activities of the different firm types in response to changes in the markets.

9.1 An evolving choice of business forms

The sources identified significant changes in ownership, organisational structures and governance arrangement, characterised in four firm types. From 1813 to the early 1830s, 25 to 30 agency houses, all partnerships, were active in Calcutta; amongst them Palmer and Co. All the firm's seven partners resided in Calcutta from where they conducted commission trade in various products and markets.[745] This was done through a network of trading partners, entities external to the firm, and particularly with a corresponding house in Britain, Cockerell and Co.[746] The firm advanced credit to indigo factory owners, and took full and partial ownership of over 40 factories as borrowers defaulted. By the 1820s the firm required over £400,000 of annual revolving credit to fund these activities. Roughly 50 per cent was provided by Cockerell and Co., the rest generated by banking operations in Calcutta.

The agency house structure broke down after the failure of Palmer and Co. and five other principal agency houses in the early 1830s. In the aftermath the number of trading partnerships increased to 73 by 1845. There was growing diversity of the size and structure amongst these firms.[747] Gisborne and Co. specialised in British textiles and used the 'purchase' system rather than commission trade. Instead of a network of external trade associates, the firm placed partners in key markets.[748] In the indigo sector the firm invested in, and managed, various factories, experimenting with different forms of ownership, including a multiple-shareholder firm, to better manage the increased capital requirements as they shifted to the zerat system of production. The annual credit requirements, for trade and indigo, of around £200,000 were almost entirely financed through an arrangement with Barings.

[745] Chapter 4.3, details the management structure of Palmer and Co. whilst figure 9, p.91, shows that there was a mean average of 3 partners per firms in this period.
[746] Chapter 3.7.2, and figure 11, p.96, show the close correlation between the agency houses in Calcutta and East India agency houses in London.
[747] Chapter 3.7.1, table 8, p.92, and table 9, p.94, show the trends of size amongst the firms in the 1840s and 1850s.
[748] Chapter 3.7.2 discusses the methods used by the firms to manage international trade, and the growing number of firms using new methods such as placing partners in key markets or using agents.

After 1850 tendencies towards specialisation and experimentation with ownership became more pronounced in industries which had increasing levels of capital intensity. The joint-stock form's improved capacity to generate capital saw 173 incorporated firms operating in Calcutta by 1868, 70 of which were in the tea sector.[749] The Assam Co. raised capital from shareholders in London and Calcutta to fund over £25,000 of fixed capital investments in the construction of tea gardens and related infrastructure in Assam in its first year alone.[750] The firm fully integrated production and marketing functions between India and Britain, using a dual-board structure to coordinate activities. The increasing scale of operations saw more than 20 European managers and thousands of coolie labourers employed to work the gardens, whose annual costs were mainly funded by credit obtained in Calcutta.

As the number of joint-stock firms increased, so did the number of firms providing managing agency services. Between 1858 and 1868 the number of agents doubled and the firms using agents quadrupled. Over 40 per cent of joint-stock firms operated with an agent by 1868.[751] Ogilvy, Gillanders and Co. evolved from a trading partnership specialised in British textiles in the 1830s, to managing, promoting and owning joint-stock firms in industries including tea, railways, and jute from the 1850s. The firm retained the partnership form, and with over 12 partners and assistants and 100 Indian administrative staff provided a range of managerial services including the promotion of shares, coordination of finances and labour, whilst overseeing operations and reporting to the owners.

Table 23 summarises the experimentation with different forms of ownership across the period. The change between partnership and joint-stock forms was accompanied by shifts between networked and integrated organisational structures. The failure of the agency house model in the 1830s resulted in diversification and experimentation amongst the trading partnerships, with

[749] Chapter 6.6, and figure 24, p.197, table 15, p.199, show the growing number and sectors in which the joint-stock firms were located and the level of capital intensity in each sector.
[750] £25,000 was a significantly larger up-front capital investment than required in other industries. Chapter 3.4 estimates the cost at around £1,000 to set-up a medium size indigo factory, whilst Chapman estimated it cost £5,000 to establish a medium size Cotton factory in Britain in this period.
[751] Chapter 6.7 and figure 25, p.202, figure 26, p.205, show the growth in the number of managing agents and firms under management.

increasing specialisation in activities. After 1850, growing capital needs saw increased efforts to leverage the benefits of the joint-stock form, but within twenty years the joint-stock firms were increasingly subsumed or under the control of managing agents, which became the dominant form of business organisation by 1870.

Table 23. Summary of the four case studies

Firm	Ownership form	Organisational structure	Main activities	Sites of operations	Financing	Key transaction characteristics and contracts	Performance
John Palmer and Co.	Partnership	Network of independent trading firms	Commission trade, banking (deposit, loans and issues), indigo factories owned not managed	Calcutta, Java	Mix of external and internal	Transactions for finance and indigo managed by bi-lateral partnerships, weak contracts and governance between partners.	Failure of the firm and form
Gisborne and Co.	Partnership	Network of partners	Own account trade, indigo factories partially owned and managed	Calcutta, Bombay, Liverpool, London, Bengal/Bihar	Predominantly external	Experiments with integration into indigo, improved bi-lateral contracts to secure finance	Profitable and stable, 33% ROCE, transitional form
Assam Co.	Joint-Stock	Integrated producer and marketer	Tea plantations fully owned and managed, direct sales of tea	Calcutta, London, Assam	Predominantly internal	Fully unified transactions. Dual board structure. Failure of governance due to separation of owners and managers.	Relatively low profit, 8% ROCE, subsumed/reliant on managing agents
Ogilvy, Gillanders and Co.	Hybrid	Network of partners and managed firms	Own account trade, indigo factories owned and managed, management of firms	Calcutta, Bombay, Liverpool, Manchester, London, Assam	Mix although increasingly external	Partial integration into tea, flexible partnerships and contracts with managed firms.	Profitable and stable, 26% ROCE, proliferating form

9.2 The balance between transaction and agency costs

To analyse why certain business forms were preferred the thesis drew on transaction and agency cost theories. The transactions for finance, information and trade products such as indigo and tea were the most regular across the period and the firms used a range of governance and contracting mechanisms to manage them.

The thinness of the financial markets in Calcutta made market governance ineffective for securing credit and capital, leading to the employment of more powerful governance regimes to manage these critical transactions. Palmer and Co. internalised the transactions by developing deposit and issue banking functions. The Assam Co. internalised the transactions for capital through incorporation and the issuance of shares. Palmer and Co. and Gisborne and Co. both used bi-lateral partnerships, with Cockerell and Co. and Barings respectively, to access credit. These arrangements reduced the threats of hold-up in the supply and the transaction costs incurred through repetitive use of the market.

The widespread use of the purchase system and greater specialisation in British textiles in the 1830s, required the firms to put more capital at risk in geographically distant markets, changing the characteristics of these transactions. To reduce these risks Gisborne and Co. and Gillanders and Co. moved away from market governance and internalised these transactions by placing partners directly in key markets. This improved the flows of information and lowered threats of opportunism and hold-up from external agents.

The transactions for indigo were undertaken by a full-range of governance mechanisms. The volatility inherent in indigo production caused problems in market and resource coordination, whilst the reliance placed on indigo as a remittance instrument further increased the costs of hold-up and threats of opportunism. The fear of hold-up in supply, and desire to access information of market conditions, incentivised Palmer and Co. to use bi-lateral partnerships rather than market governance. The capacity to control costs and quality in the indigo production process encouraged Gisborne and Co. and Gillanders and Co. to undertake full integration.

Meanwhile, the transactions for information shifted in focus, from understanding supply, demand and prices, to costs of production. A similar rationale was found in the tea sector, where the high capital investments required to found the gardens increased the asset specificity of the transactions for tea, leading to full integration through the joint-stock form.

The decisions to use bi-lateral partnerships or fully internalise transactions had implications for the internal organisation of the firms which affected agency costs. The use of networks to manage activities at distance, and bi-lateral partnerships to access resources, required governance that could reduce the threats of opportunistic behaviour or minority repression between the parties. As Palmer and Co. and the Assam Co. found monitoring of the relationships and enforcement of the agreements was complicated and expensive when the parties were separated by distance. Gisborne and Co. and Gillanders and Co. showed that experiments with contracts and incentives were used to align the interests of the parties and reduce opportunism.

Internalising transactions overcame the problems of the bi-lateral partnerships but raised various other issues. The decision of Gisborne and Co. and the Assam Co. to integrate transactions for indigo and tea required the firms to make larger investments in fixed assets increasing the costs of untimely dissolution. The firms also needed to increase their managerial capacity to manage the new activities. The growing scale and distribution of the Assam Co.'s activities required improved coordination systems and governance to lower the threats of opportunism between the growing numbers of agents.

The entrepreneurs needed to balance the benefits of internalising certain transactions against the increased costs of agency incurred by these decisions. The change between different forms of organisation and ownership can therefore be understood as responses to shifts in the balance of the transaction and agency costs, and the success or failure of the different firm types explained by their ability to manage the trade-offs.

9.2.1 Ownership, organisation, and performance

The expansion of Palmer and Co. and other agency houses was enabled by their capacity to use internal and bi-lateral mechanisms to manage the transactions for finance, overcoming the thin local credit markets. The partners failed, however, to adequately coordinate or manage the growing risk of these expanded operations or address the rising problems of opportunism amongst the growing number of partners needed to control them. Whilst these problems affected the performance of the firm, the collapse was due to the failure of governance regulating the bi-lateral partnership with Cockerell and Co. This could also explain the failure of the other principal agency houses in the early 1830s, each of which had similar financial relationships with corresponding firms in London.

The trade-off between the transactions for finance and the agency problems of bi-lateral partnerships was addressed by Gisborne and Co. through experiments with governance. The internalised network of geographically dispersed partners allowed the firm to manage the risks of specialised, own account trade. The use of contracts and interlocking directorate style relationships strengthened the partnership with Barings avoiding untimely dissolution. This eliminated the need to internalise the banking operations. Similarly, the unstable relationships with indigo factory owners saw Gisborne and Co. experiment with integrating the factories utilising a multiple-shareholder firm to diversify the risks of investment, reduce threats of hold-up and enable control over the costs and quality of production. This structure allowed the firm to generate an annual ROCE of 33 per cent, and remain active for 60 years. Although many other experiments in this period failed to achieve this balance, they represented the growing efforts to secure transactions for capital, and balance the interests of diverse agents.

Raising sufficient capital to invest in new industries was complicated by the thinness of the Calcutta market and the difficulties partnerships faced in increasing their size due to rising costs of agency. The Assam Co., along with a growing number of firms after 1850, internalised the transaction for capital through incorporation. They leveraged the joint-stock form's benefits in diversifying risk and reducing the threat of untimely dissolution. The ownership form, however, significantly increased agency costs. The separation of principals and agents, meta-physically and physically, offered great scope for opportunism. The dual-board structure and weaker incentives reduced the firm's capacity to share information and retain knowledge, retarding their capacity to effectively manage the production processes. This resulted in a relatively low ROCE of 8 per cent, and significant losses in the 1860s. The travails of the Assam Co. showed the difficulties the joint-stock firms faced in establishing control over agents, with 'negligence and profusion' an endemic feature of the operations, limiting the more widespread expansion of the form.

Firms in the tea industry needed to solve two distinct problems; obtaining capital for fixed investments and reducing the agency costs of doing business at distance. Neither form of ownership adequately addressed both problems. The managing agent hybrid form allowed a balance to be achieved, lowering transaction costs through the joint-stock form, whilst mitigating the opportunism and costs of agency through the partnership. The partnership form allowed Gillanders and Co. to attract and coordinate a growing number of high quality partners and assistants due to the incentives of profit share and capital investment. The firm successfully expanded into a range of industries, generating an average annual ROCE of 26 per cent. The form's balance and flexibility saw the managing agent system dominate the Anglo-Indian trade by 1870.

9.3 A new interpretation of 19th century Anglo-Indian trading firms

This analysis offers a reinterpretation of the established narratives of the 19th century Anglo-Indian trading firms. The explanations of the failure of the agency houses have principally drawn on Larpent's testimony which focused on the over-extension of the local banking operations, caused by the thin credit markets, and over-exposure to the indigo market.[752] However, the

[752] Tripathi, *Trade and Finance in the Bengal*, 1833 Report from the Parliamentary Select Committee on Manufactures.

findings in this thesis build on Webster's analysis of the problems Palmer and Co. faced with its internal management. The firm's failure is attributed to the weakness of the contracting and governance arrangements underpinning the bi-lateral partnership with Cockerell and Co. As the relationships with the British corresponding houses were common to all the large agency houses, the findings offer a new interpretation of the failure of the model.

Larpent's prediction that the trading firms would be smaller and better capitalised after 1830 was not borne out by the sources.[753] They actually revealed a growing diversification in size and structure amongst the trading firm population. The case of Gisborne and Co. indicated that some of these firms could achieve scale and stability, counter to Chapman's claims that the firms were fundamentally weaker than their predecessors. This was, though, a period of experimentation with variable results, particularly amongst the larger firms. The analysis showed that entrepreneurs explored various ownership forms and organisational structures to find sustainable financial arrangements and ways to integrate production, leading eventually to the experiments with the joint-stock form.

The rapid rise in the number of joint-stock firms across various sectors in the late 1850s, and their role in channelling capital investment from Britain to India bear strong resemblance to the FSC model described by Wilkins.[754] Explanations of the decisions to incorporate did, though, show an evolving set of factors that encouraged the use of the form, beyond those of capital formation. The capacity of the integrated joint-stock form to control the production process, lowering costs and raising quality, whilst reducing the threats of hold-up and untimely dissolution, were significant advantages.

This reading challenges Chapman's abrupt dismissal of the importance of the FSCs in India, and his description of the smooth evolution from agency houses to managing agencies.[755] Instead, entrepreneurs used the joint-stock form in growing numbers, and across a range of sectors, to

[753] 1833 Report from the Parliamentary Select Committee on Manufactures, Larpents testimony.
[754] Wilkins and Schröter, *The Free-Standing Company*.
[755] Stanley Chapman, "British Free-Standing Companies," Chapman, *Merchant Enterprise*.

integrate a whole range of activities. However, the separation of principals and agents, particularly with owners in Britain and managers in India, increased agency costs which the joint-stock firms were unable to mitigate sufficiently. The failure of the joint-stock form to achieve more widespread adoption was a function of the form, rather than due to the efforts of small groups of rent-seeking partners seeking to control access to, and profits from, the local industries in Bengal.[756]

These findings recast the role of the managing agents during the late 1850s and 1860s. Alongside their capacity to access scarce resources, success was founded on the ability to lower the agency costs of doing business in distant markets. Chapman's description of the 'legal fiction of agency' does not adequately capture the managing agents operations in the tea trade. The role of agent and provision of managerial services was a key aspect of their business, certainly prior to 1870. Chapman and Misra's dismissal of the partnership form as a rent-seeking arrangement also fails to grasp the important role it played in controlling agents at distance.[757] Casson's description that, "the separation of ownership and management effected by the managing agency system is designed to distribute the enormous risks," was made feasible by the agents' capacity of not only diversifying investment risk, but reducing the threats of opportunism and mismanagement.[758]

The entrepreneurs in the Anglo-Indian trade did not see the choice of ownership as a dichotomy, with one form replacing the other. Instead, a symbiosis emerged between the forms, with the strengths of each adapted to mitigate the trade-offs faced by the firms. This evolution shows the entrepreneurs in the mid-19th century as both innovative and successful in their use of a range of ownership and organisational forms. Their approach to ownership suggests that far from being anachronistic rent-seekers retaining the partnership as a vehicle for family firms to extract profits, they were much closer to the innovative and flexible entrepreneurs described by Jones

[756] Rungta, *Business corporations in India.*
[757] Chapman, *Merchant Enterprise,* Misra, *Business, Race, and Politics.*
[758] Casson, "An economic theory of the Free-Standing company."

and Wale, capable of developing firm structures to meet the demands of the expanding and internationalising industries such as tea.[759]

9.3.1 The historical development of trading firms

More broadly these findings support the assertion of Lamoreaux et al. and others that the integrated corporate firm should be seen as only one amongst many forms of business organisation that could compete and successfully grow global industries such as tea.[760] A wide ecology of firm types was active and successful, even as the joint-stock form became readily available and more widely employed in the second half of the 19th century. The boundaries of the firm were pushed by entrepreneurs in this period to identify forms that allowed them to achieve the benefits of scale and align the interests of owners, investors and managers.

The findings from this thesis support the call for a more nuanced approach to understanding the trade-offs between forms of organisation and ownership and suggest that the historical explanations of trading firms, particularly in the 19th century, can be reassessed. The trade-offs created by transactions for credit, capital, information and trade products, and the agency costs caused by distance and time, encouraged experimentation and the adoption of different business forms to address evolving challenges. The partnership firm undertaking commission trade through short-term credit was only one of various types of firms undertaking the Anglo-Indian trade. Forms such as the FSC should be analysed in conjunction with traditional trading partnerships to better understand the development of trading systems across the 19th century.

The Anglo-Indian trade followed broader global trends, with a take-off in value and volume after 1850. The global trends have predominantly been explained in economic history as the result of changes in technology and institutions.[761] Less attention has, however, been paid to understanding the business organisations that undertook the trade. In the case of the Anglo-Indian trade, it was notable that the biggest technological advances, driving the fall in sailing

[759] Jones and Wale, "Merchants as Business Groups."
[760] Lamoreaux et al., "Beyond markets and hierarchies."
[761] O'Rorke and Williamson, *Globalization and history.*

times, and institutional changes resulting in the removal of tariffs, occurred prior to 1850.[762] The take-off in value and volume, however, came after as entrepreneurs' experiments with business forms allowed them to channel capital and diversify risks of investments whilst reducing the costs of agency to take advantage of these developments. These experiments and gradual refinement of business forms should be regarded as a key factor in understanding the growth of 19th century international trade and patterns of globalization.

9.3.2 The historical theory of the firm

The concept that forms of ownership and organisation are determined by transaction and agency costs found strong support in the sources. Williamson's hypotheses are borne out in the various decisions to internalise transactions, as threats of hold-up and asset specificity increased. The commodity chain analysis was adept in revealing the changes in the transactions undertaken by the firms. Likewise, the costs of opportunism, or shirking, and untimely dissolution, as described by Lamoreaux and Rosenthal, had a significant effect on the choice of business form. The logic of the theories does provide a high degree of explanatory power when considering the changes within the firms and the choices of the entrepreneurs.

The analysis revealed, however, a reflexive relationship between the two sets of costs. The decision to change the governance of the transactions required subsequent shifts in the structure to reconfigure agency costs. In the case of the tea industry the balance shifted, as the importance of the transactions for capital to fund the infrastructure investments were increasingly subsumed by the transactions for human capital as competition increased. This increased the costs of agency, as managers needed to be hired and aligned to the interests of the firm.

The firms' structure evolved, dependent on the changing conditions of the industry. In the case of the managing agents' entrepreneurs sought a hybrid structure to efficiently reduce both transaction and agency costs, supporting Jones' findings that it was the managing agents'

[762] Kaukiainen, "Shrinking the World," sailing times from London to Calcutta fell from 154 days to 47 days between1820 and 1850, and 47 to 33 days between 1850 and 1870. Tariffs on indigo had been removed entirely by 1846.

capacity to lower a range of transaction costs that determined their success and proliferation into the 20th century.[763] This also allows Hennart and Casson's competing explanations of business form, to be combined.[764] The need to internalise capital transactions, against those of internalising flows of information and knowledge, are important at different stages of industry and firm development. In the case of tea, the importance of capital was subsumed by the need for information and knowledge as competition increased.

This method of analysis provides a dynamic explanatory model that can explain the transition of firm types from the joint-stock monopoly of the EIC to the hybrid managing agents. As Adam Smith prophesied the problems created by the costs of agency proved a persistent factor in explaining the limited adoption of the joint-stock form by British entrepreneurs operating in international markets across the 19th century. The hybrid solution found in the thesis does, though, challenge the dichotomies proposed by Lamoreaux and Rosenthal, and Williamson, whereby one form of governance or ownership was preferred, dependent on the characteristics of the transaction or balance of agency costs.[765] The analytical model can be further nuanced to account for the importance of hybrid solutions.

9.4 Limitations of the findings

There are clear limits to the explanatory power of these findings. The use of the case studies provides good depth in understanding the mechanisms and interplay of the forces motivating the entrepreneurs' decisions, but limits the generalizability of the claims. As the sources showed, each of the firms was larger than average, and aspects of their characteristics such as Gisborne and Co.'s relationship with Barings, and the Assam Co.'s near monopoly at inception, potentially set them outside the normal distribution of the firm population. The extent to which the success of Gisborne and Co. and Gillanders and Co. was due to the partnership form can be

[763] Jones, "Merchants to multinationals."
[764] Jean-Francois Hennart, "Transaction-cost theory and the Free-Standing Company", Casson, "An economic theory of the Free-Standing company."
[765] Lamoreaux and Rosenthal, "Contractual trade-offs and SMEs' choice of organizational form."

questioned, after all many partnerships failed. Did they avoid untimely dissolution due to luck, exceptional management, or as claimed here an iterative and more nuanced applications of the flexible contracting arrangements in the partnership form?

It was also difficult, based on the evidence available from the registers, to determine whether the agency relationships identified in the case of the Assam Co. and Gillanders and Co. were representative. The extent to which the agents contracted independently with client firms or were the instigator of joint-stock firms has not been reported in a systematized manner. The causality of the transition between the joint-stock and managing agents may be reversed, which would indicate that Chapman's description of the 'legal fiction of agency' may have been dominant before 1870. However, the individual cases identified here provide support for a different interpretation pre-1870.

A further issue with the interpretation of the sources lies in the use of the theory. The concepts of hold-up and asset specificity provide logical interpretations of the entrepreneurs' actions, but the sources can be ambiguous in confirming their causality within the decisions taken. There is some direct evidence in which the historical actors discussed decisions about firm organisation, such as the Assam Co.'s memorandum of agreement. However, other sources such as the regularly repeated concerns about the need for supply of indigo as a remittance mechanism, offer scope for interpretation. In this thesis this has been read as a source of hold-up, and thus a motive for integration, but the importance of these factors on the decisions of the entrepreneurs could be over-determined by the use of theory.

Similarly, although an aim of the thesis, the decision to limit the analytical focus to the economic factors central to the theory of the firm left out important effects created by institutional changes. In particular, a better understanding of the legal institutions in India would have improved the analysis, as the capacity to enforce contracts was critical to understanding the effectiveness of the various governance regimes.

9.5 Managing agency capitalism

These findings indicate that further work at the level of the entrepreneur and firm, in different industries and sectors, would contribute to a richer understanding of factors that shaped choices regarding ownership and organisation. The findings could be strengthened by further case studies to correlate the representativeness of these findings. It would be particularly interesting to look for evidence from smaller firms and those that failed to develop a more rounded understanding of the experiences within the total firm population.

Whilst the explanatory scope of the thesis is limited due to the discrete location of the cases it raises interesting questions about the choice of business organisation employed in other global markets. The managing agents have tended to be viewed as a British model of business organisation for managing overseas investments. If this was a distinctly British model the explanation for their emergence and existence would lie in cultural traits of British entrepreneurship and the financial and legal frameworks that bound London to the British Empire.

If, however, the intuition of this thesis is correct, and the organisation evolved to reduce costs of agency, whilst allowing capital formation, then it could be expected that entrepreneurs of different nationalities would adopt similar forms of business organisation to address the challenges of long distance trade and foreign direct investment. Jonker and Sluyterman's description of conditions in the Dutch East Indies during the 1860s, where thin credit markets, increasing need for investments and advances on plantation crops such as Tobacco, and the problems of distance, drove trading firms to innovate forms of ownership and organisation, are perhaps indicative of a similar process at work.[766] A case for a 'Managing agency capitalism' may be made if the form is found to have proliferated elsewhere.

Further comparative analysis between firms of different national origins, including Dutch and US merchants in Asia, French merchants in Africa, and conversely firms of Asian origin, would

[766] Jonker and Sluyterman, *At home on the world markets*, 203-205.

enable a thorough analysis of these questions. The findings may illustrate different trajectories of internationalisation, but also identify common factors related to choice of ownership and organisation. This approach would broaden the Free-Standing Company research agenda and deepen understanding of the emergence of multinational enterprises.[767] It would also improve understanding of the effect that business organisation has had on the shape and velocity of globalization across the 19th century.

[767] Mira Wilkins, "The History of the multinational enterprise," in *The Oxford Handbook of International Business*, edited by Alan Rugman (Oxford University Press, 2009), this summary indicates a gap between the analysis of the chartered trading companies to the early 19th century, and the explanations of the emergence of 'modern' multinational firms at the end of the 19th century, that further analysis of hybrid forms such as the managing agents might help to fill.

Appendix One Note on the Calcutta Directories

The dataset of firms used in the thesis was assembled from Calcutta commercial directories and registers. The Original Calcutta Annual Directory and Calendar published in 1813 was the first in a series of registers that listed information relating to the civil and military life in Calcutta and Bengal.[768] The registers are located at the British library and the series runs continuously from 1813 with only copies for 1816, 1825 through to 1830, and 1833 missing from the series.

Each register contained a number of common sections including: Civil lists, military lists, and an appendix with civic and commercial institutions and societies. The commercial appendix listed all the active merchants and agents. The early registers simply listed the names of the firms, but in 1824 and 1843 respectively, the names of partners and assistants were added. From 1858 the ventures for which the firm acted as agent and the agents representing the firm in different markets were introduced. Names of related trade firms such as the agency houses in Britain with interests in India were also recorded from 1813. Information on a range of other firms such as insurance companies, banks, transportation companies, auctioneers, local manufacturers, retailers and subsequently public firms with tradable shares were added overtime.

A number of benchmark years were selected across the period of the study. The first in 1813 and then where possible each fifth year until 1868. The year 1824 was used instead of 1823 as this was the first year that named partners were listed, and 1843 was included due to the addition of the assistants. The year 1831 was used as there was no register for 1828 and 1834 as there was no register for 1833. A number of other registers were sampled to explore some of the major incidents in the period, in particular the crisis of the 1830s and late 1840s. In this case 1831, 1834 and 1838 are used to look at the effects of the first crisis. Then 1845, 1847, 1848 and 1849 explore the crisis of 1847. This provided a total of sixteen benchmarks.

[768] Although there had been registers published before this, 1800 was noted as the first date of publication, the 1813 edition seemed to be the start of the registers as a regular annual series.

Limitations of the data

The data in the registers is problematized by a number of factors. There is an obvious issue of accuracy within the lists. Writing in 1910 whilst undertaking a similar exercise John Gladstone noted, “I next examined the Calcutta directories which were available from 1820 to 1834 and 1836 … the list of firms appears incomplete, and I conclude the directors was not very accurate.”[769] The main complaint was that he could not find the partners who founded Ogilvy, Gillanders and Co. listed as active in Calcutta in a certain year.

It is probable, though, that the basic list of firms is reasonably accurate. The Calcutta business community was close-knit and a local compiler would ascertain the firms’ active in the market in a given year. The problems of omission are more likely in the recording of partners and assistants, who could change their status rapidly. As the lists expanded to record the location of overseas partners, and subsequently the overseas agents and other interests, the problems with omission increase.

There was no specific delineation of the joint-stock firms, with some listed as Limited (Ltd or Limited liability) but with no consistent definition in the registers as to their ownership status it is unclear as to whether these were actual joint-stock firms or had simply appropriated this common label. Similarly the relationships between the firms acting as agents are described by a range of terms including: agents, honorary agents, secretaries, owners, and proprietors. This makes it difficult to distinguish the type of relationship, and the services which were undertaken by the firm acting as agent.

Over the years the publisher and the compiler of the registers changed. In the British library collection the available registers were from three main publishers.[770] The changes in compliers

[769] GG 2746 Memorandum from John Gladstone on the formation of the firm, 1910.
[770] From 1824 to the late 1850s it was named the Bengal Directory and Annual Register, expanded to the Bengal and Agra Directory and Annual register, and compiled and printed by Samuel Smith and Co. In the late 1850s the New Calcutta Directory first appeared, compiled by A.Roussac and available until 1863. The rest of the period was covered by Thackers directory for Bengal, the North-Western provinces, the Punjab, the Central provinces, the Rajpootana states, Oude, and British Burmah, published by Thacker,

and publishers resulted in differences in the structure of the merchant and banking lists which were divided along the lines of nationality and ethnicity. The earlier registers included separate lists of Armenian, Greek, Jewish, French and Italian merchants amongst others. There were also separate lists for local native merchants and bankers. There are inconsistencies in the lists in which certain firms appeared. For example in one year the Apcar Brothers appeared in the main Merchant list, whereas in others they were listed as Armenian merchants. Firms such as the American owned Willis and Earle also appeared in the merchant list. As there was no accompanying commentary on the rationale behind these choices, the main merchant list is used to construct the count of firm types rather than attempting to untangle the inclusions and exclusions of each list.

Spink and Co. of London. There was only one instance, in 1858, where two directories from different publishers were available for the same year and in this case the New Calcutta Directory was used.

Bibliography of Works Cited

Archival Sources

Barings Archive (BA) HC2 Statistics of General Trade series and HC6 correspondence relating to Gisborne and Co. in the Indian subcontinent, Far East and Australasia series.

Bodleian Library (BoD) John Palmer’s correspondence located in the Ms Eng Letters Series C68 – C126.

British Library (BL) Shelf mark OIR 954.14 ST 1216 CH Calcutta and Bengal Commercial registers.

Digital South Asia Library (DSAL), various series taken from the statistical abstracts relating to British India from 1840 to 1865, and from 1860 to 1869.

Glynne-Gladstone (GG) Papers related to Ogilvy, Gillanders and Co. and Arbuthnot, Gillanders and Co. located in the series GG 2548 – GG 2729.

London Metropolitan Archives (LMA) Papers related to the Assam Company Ltd. in series Ms.08794 – Ms.09936 and Ms.27046 – 27073 and Harrison Crossfield and Co. in series Ms.37003.

Parliamentary acts and reports:

13 Geo III C.63 East India Company Act 1772

24 Geo III c.25 East India Company Act 1784

HC 690 1833 Report from the Parliamentary Select Committee on Manufactures, Commerce, and Shipping

HC 72-2 1861 East India Indigo Commission, papers related to indigo cultivation in Bengal

The Post Office London Directory 1841

Books

Antrobus, H. *The History of the Assam Company 1839–1953*. Edinburgh: Constable Ltd, 1957.

———. *A History of the Jorehaut Tea Co. Ltd 1858–1943*. London: Tea and Rubber Mail, 1948.

Bagchi, Amiya. *The evolution of the state bank of India, Part 1 1806 – 1860.* Delhi: Oxford University Press, 1987.

Bates, Robert, Avner Greif, Margaret Levi, Jean-Laurent Rosenthal, Barry Weingast. *Analytic Narratives*. New Jersey: Princeton University Press, 1998.

Berle, Adolf and Gardiner Means. *The Modern Corporation and Private Property*. New York: Harcourt, Brace & World, 1968.

Bowen, Huw. *The Business of Empire: The East India Company and Imperial Britain, 1756-1833*. Cambridge: Cambridge University Press, 2005.

Brown, Hilton. *Parry's of Madras*. Madras: Published privately by Parry & Co, 1954.

Casson, Mark. *Information and Organisation, A new perspective on the theory of the firm*. Oxford: Clarendon Press , 1997.

Chandler, Alfred. *Scale and Scope: Dynamics of Industrial Capitalism.* Cambridge, MA: Harvard University Press, 1994.

———. *The Visible Hand: Managerial Revolution in American Business*. Cambridge, MA: Harvard University Press, 1977.

———. *Strategy and structure: Chapters in the History of the American Industrial Enterprise*. Cambridge, MA: MIT Press Reprint, 1974.

Chapman, Stanley. *Merchant Enterprise in Britain: From the Industrial Revolution to World War I*. Cambridge: Cambridge University Press, 2004.

———. *The rise of merchant banking*. London: George Allen and Unwin, 1984.

Cheffin, Brian. *Corporate ownership and control: British Business transformed*. Oxford: Oxford University Press, 2008.

Chaudhuri, Kirti (ed.). *The Economic Development of India under the East India Company 1814-58; a Selection of Contemporary Writings*. London: Cambridge University Press, 1971.

Chowdhury, Benoy. *Growth of Commercial Agriculture in Bengal.* Calcutta: Quality Printers, 1964.

Colli, Andrea. *The History of Family Business, 1850–2000*. Cambridge: Cambridge University Press, 2003.

Cottrell, Philip. *Industrial Finance 1830 – 1914*. London: Methuen & Co, 1980.

Crafts, Nicholas. *British Economic Growth during the Industrial Revolution.* Oxford: Oxford University Press, 1985.

Davar, Sohrab. *Business organization and industrial management*. Bombay: Progressive Corporation, 1969.

Frentrop, Paul. *Corporate governance 1602-2002*. Amsterdam : Prometheus, 2002.

Gladstone, John. *History of Gillanders, Arbuthnot & Co and Ogilvy Gillanders & Co*. UK: Published privately, 1910.

Greenberg, Michael. *British Trade and the Opening of China, 1800-1842*. Cambridge: Cambridge University Press, 1951.

Griffiths, Percival. *The History of the Indian Tea Industry*. London: Cloves and Son, 1967.

Gras, Norman. *Casebook in American Business History*. New York: F.S. Crofts and Co, 1939.

Harris, Ron. *Industrializing English Law: Entrepreneurship and Business Organization, 1720–1844*. New York: Cambridge University Press, 2010.

Holden, Furber. *John Company at work*. Cambridge MA: Harvard University Press, 1948.

Jensen, Michael. *Theory of the firm Governance, Residual Claims, and Organisational forms*. Cambridge MA: Harvard University Press, 2000.

Johnson, Paul. *Making the market: Victorian origins of corporate capitalism*. Cambridge: Cambridge University Press, 2013.

Jones, Geoffrey. *Merchants to Multinationals: British Trading Companies in the 19th and 20th Centuries*. New York: Oxford University Press, 2000.

———. *British multinational banking 1830 – 1990. Oxford:* Oxford University Press, 1995.

Jones, Stephanie. *Merchants of the Raj: British Managing Agency Houses in Calcutta Yesterday and Today*. London: Palgrave McMillan, 1992.

Jonker, Joost and Keetie Sluyterman. *At Home on the World Markets: Dutch International Trading Companies from the 16th Century until the Present*. The Hague: Sdu Uitgevers, 2000.

Kling, Blair. *Partner in Empire: Dwarkanath Tagore and the Age of Enterprise in Eastern India.* Los Angeles: University of California Press, 1992.

Kumar, Dharma and Meghnad Desai, (eds.). *The Cambridge economic history of India. Vol. 2, C. 1757- 1970*. New York: Cambridge University Press, 1983.

Lamoureaux, Naomi. *Insider Lending: Banks, Personal Connections, and Economic Development in Industrial New England. New York:* Cambridge University Press, 1996.

Lazonick, William. *Organization and technology in capitalist development*. Aldershot: Edward Elgar Publishing, 1992.

Lokanathan, Palamadai Samu. *Industrial Organization in India*. London: George Allen and Unwin, 1935.

Marschak, Jacob and Roy Radner. *Economic theory of teams*. New Haven: Yale University Press, 1972.

Martin, Stephen. *Industrial Organisation in Context*. Oxford: Oxford University Press, 2010.

Meyer, Colin. *Firm Commitment: Why the corporation is failing us and how to restore trust in it*. Oxford: Oxford University Press, 2013.

Micklethwait, John and Adrian Wooldridge. *The company: A short history of a revolutionary idea*. New York: Modern Library, 2005.

Misra, Maria. *Business, Race, and Politics in British India, c. 1850–1960*. New York: Oxford University Press, 1999.

Mitchell, Brian. *British Historical Statistics.* Cambridge: Cambridge University Press, 2011.

Mortimer, Thomas. *The elements of commerce, politics, and finance in three treatises on those important subjects*. London: 1778.

Muller, Leos and Jari Ojala (eds.). *Information flows: New Approaches in the historical study of business information.* Helsinki: SKS, 2007.

Orbell, John. *Baring Brothers & Co., Limited: a history to 1939*. London: Baring Brothers & Company, 1995.

O'Rorke, Kevin and Jeffrey Williamson, *Globalization and history: The evolution of a nineteenth-century Atlantic economy.* Cambridge MA: MIT Press 1999.

Prakash, Kumar. *Facing competition: The history of indigo experiments in colonial India, 1897-1920*. Dissertation for Georgia Institute of Technology, 2004.

Ray, Indrajit. *Bengal Industries and the British Industrial Revolution*. New York: Routledge, 2011.

Roy, Tirthankar. *The Economic History of India 1857–1947*. Delhi: Oxford University Press, 2001.

———. *India in the World Economy*. New York: Cambridge University Press, 2012.

Rungta, Radhe Shyam. *The Rise of the Business Corporation in India 1851–1900*. Cambridge: Cambridge University Press, 1970.

Sen, Sundipta. *Empire of Free Trade: East Indian Company and the Making of the Colonial Marketplace*. Philadelphia: University of Pennsylvania Press, 1998.

Singh, S.B. *European Agency Houses in Bengal 1783 – 1833*. Calcutta: Firma K.L Mukhopadhyay, 1966.

Sircar, Kalyan. *A Tale of Two Boards: Some Early Management Problems of Assam Company Limited, 1839–1864*. Bombay: Sameeksha Trust, 1986.

Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. New York: Oxford University Press, 2008.

Stavacre, F. *Tea and Tea Dealing*. London: Sir Isaac Pitman & Sons Ltd, 1929.

Sutherland, Lucy. *The East India Company in Eighteenth-Century Politics*. Oxford: Oxford University Press, 1952.

Temin, Peter, and Hans-Joachim Voth. *Prometheus Shackled: Goldsmith Banks and England's Financial revolution after 1700*. New York: Oxford University Press, 2013.

Topik, Steven, Carlos Marichal and Zephyr Frank (eds.). *From Silver to Cocaine: Latin American Commodity Chains and World History*. Durham NC: Duke University Press, 2006.

Tripathi, Amales. *Trade and Finance in the Bengal Presidency 1793–1833*. Calcutta: Oxford University Press, 1980.

Tripathi, Dwijendra. *The Oxford History of Indian Business*. Delhi: Oxford University Press, 2004.

Webster, Anthony. *The Richest East India Merchant, the life and business of John Palmer of Calcutta 1767–1836*. Woodbridge, UK: Boydell Press, 2007.

———. *The twilight of the East India Company: The evolution of Anglo-Asian Commerce and Politics 1790-1860*. Woodbridge, UK: Boydell Press, 2009.

Wilkins, Mira, and Harn Schröter (eds.). *The Free-Standing Company in the World Economy, 1830 to 1996*. Oxford: Oxford University Press, 1998.

Williamson, Oliver. *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting.* New York: The Free Press, 1985.

Ziegler, Philip. *The Sixth Great Power: A History of One of the Greatest Banking Families, The House of Barings, 1762 – 1929*. New York: Knopf, 1988.

Articles and Essays

Acheson, Graeme, Gareth Campbell, John Turner, and Nadia Vanteeva. "Corporate Ownership and Control in Victorian Britain." *European Association for Banking and Financial History Papers* (2014).

Adams, Julia. "Principals and Agents, Colonialists and Company Men: The Decay of Colonial Control in the Dutch East Indies," *American Sociological Review* 61, no. 1 (1996): 12 – 28.

Akerlof, George. "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism." *Quarterly Journal of Economics* 84, no. 3 (1970): 488–500.

Alchian, Armen, and Harold Demsetz. "Production, Information Costs, and Economic Organization." *The American Economic Review* 62, no. 5 (1972): 777–795.

Bakker, Gerben. “Selling French films on Foreign Markets: The International Strategy of a Medium-Sized Company.” *Enterprise and Society* 5, no. 1 (2004): 45-76.

———. “Money for Nothing: How Firms Have Financed R&D-Projects since the Industrial Revolution,” *Research Policy* 42, no. 10 (2013): 1793-1814.

Blair, Margaret. “Locking in Capital: What Corporate Law Achieved for Business Organizers in the Nineteenth Century,” *UCLA Law Review* 51, no. 2 (2003): 387-455.

Boot, H. M. “Real Incomes of the British Middle Class, 1760–1850: The Experience of Clerks at the East India Company.” *Economic History Review* 52, no. 4 (1999): 638–668.

Bodenhorn, Howard. “Partnership fragility and credit costs”, *NBER Working Paper 16689* (2011).

Broadberry, Stephen and Bas Van Leeuwen. “British Economic Growth and Business Cycle, 1700-1870: Annual Estimates,” *CAGE Online Working Paper Series* (2010).

Carlos, Ann and Steve Nicholas. “Agency problems in the early chartered companies: The case of the Hudson’s Bay Company,” *Journal of Economic History* 50, no. 4 (1990): 853-875.

Casson, Mark. “An economic theory of the Free-Standing company,” In *The Free-Standing Company in the World Economy, 1830 to 1996,* edited by Mira Wilkins and Harm Schröter. Oxford: Oxford University Press, 1998: 99-128.

Chandler, Alfred. “Organizational capabilities and the economic history of industrial organisations,” *The Journal of Economic Perspectives* 6, no. 3 (1992): 79-100.

Chapman, Stanley. “British Free-Standing Companies and Investment Groups in India and the Far East.” In *The Free-Standing Company in the World Economy, 1830 to 1996,* edited by Mira Wilkins and Harm Schröter. Oxford: Oxford University Press, 1998: 202–217.

———. “British Marketing Enterprise: The Changing Roles of Merchants, Manufacturers, and Financiers, 1700–1860.” *The Business History Review* 53, no. 2 (1979): 205–234.

———. "Financial Restraints on the Growth of Firms in the Cotton Industry, 1790-1850," *Economic History Review* 32, no.1 (1979): 50-69.

Chilosi, David and Giovanni Federico. "Asian globalisations: market integration, trade and economic growth, 1800-1938." *Economic History Working Papers, 183/13*. London School of Economics and Political Science (2013).

Coase, Ronald. "The Nature of the Firm" in *The firm, the market and the law*. Chicago: University of Chicago Press, 1988: 33-56.

Dejung, Christof. "Worldwide Ties: The Role of Family Business in Global Trade in the Nineteenth and Twentieth Centuries." *Business History* 55, no. 6 (2013): 1001–1018.

Dye, Alan. "Avoiding holdup: Asset specificity and technical change in the Cuban sugar industry 1899 – 1929," *Journal of Economic History* 54, no. 3 (1994): 628-53.

Fama, Eugene and Michael Jensen. "Separation of ownership and control," *Journal of Law and Economics* 26, no.2 (1983): 301-325.

Feinstein, Charles. "Pessimism perpetuated: Real wages and the standard of living in Britain during and after the industrial revolution," Journal of Economic History 58, no. 3 (1998): 625-658.

Fisher, Irving. "The Debt-Deflation Theory of Great Depressions," *Econometrica* 1, no. 4 (1933): 337-357.

Fohlin, Caroline. "The Rise of Interlocking Directorates in Imperial Germany." *Economic History Review* 52, no. 2 (1999): 307-333.

Foreman-Peck, James, and Leslie Hannah. "Extreme divorce: the managerial revolution in UK companies before 1914," *Economic History Review* 65, no. 4 (2012): 1217-1238.

Foss, Nicolai, and Peter Klein. “The Theory of the Firm and Its Critics: A Stocktaking and Assessment,” in Jean-Michel Glachant and Eric Brousseau, (eds.). *New Institutional Economics: A Guidebook.* Cambridge: Cambridge University Press, 2008: 425-442.

Gelderblom, Oscar, and Joost Jonker. “Completing a Financial Revolution. The Finance of the Dutch East India Trade and the Rise of the Amsterdam Capital Market, 1595-1612,” *The Journal of Economic History* 64, no. 3 (2004): 641-672.

Ghoshal, Sumantra and Peter Moran. “Bad for Practice: A Critique of the Transaction Cost Theory,” *The Academy of Management Review* 21, no. 1 (1996): 13-47.

Granovetter, Mark. “Economic Action and Social Structure: The Problem of Embeddedness,” *American Journal of Sociology* 91, no. 3 (1985): 481-510.

Grant, Robert. “Toward a Knowledge-Based Theory of the Firm,” *Strategic Management Journal* 17, no. 2 (1996): 109-122.

Guinnane, Timothy. “Cooperatives as Information Machines: German Rural Credit Cooperatives, 1883–1914.” *Journal of Economic History* 61, no. 2 (2001): 366–389.

Hannah, Leslie. “Marshall’s ‘Trees’ and the Global ‘Forest’: Were Giant Redwoods Different?” In *Learning by Doing in Markets, Firms, and Countries,* Naomi Lamoreaux, Daniel Raff, and Peter Temin (eds.). Chicago: University of Chicago Press, 1999: 253-294.

Hansmann, Henry, and Reinier Kraakman. “The Essential Role of Organizational Law,” *Yale Law Journal* 110 (2000): 387–440.

Harris, Ira, and Timothy Rufeli. “The strategy/structure debate: an examination of the performance implications,” *Journal of Management Studies* 37, no. 4 (2000): 587-604.

Hejeebu, Santhi. “Contract Enforcement in the English East India Company,” *The Journal of Economic History* 65, no. 2 (2005): 496-523.

Hennart, Jean-Francois. “Transaction-cost theory and the Free-Standing Company”, In *The Free-Standing Company in the World Economy, 1830 to 1996,* Mira Wilkins and Harm Schröter (eds.). Oxford: Oxford University Press, 1998. 65 – 98.

Henriksen, Ingrid. “Avoiding Lock-In: Cooperative Creameries in Denmark, 1882–1903.” *European Review of Economic History* 3, no. 1 (1999): 57–78.

Hilt, Eric. “Incentives in Corporations: Evidence from the American Whaling Industry.” *Journal of Law and Economics* 49, no. 1 (2006): 197–227.

Hopkins, Terrence, and Immanuel Wallerstein. “Commodity chains in the world economy,” *Review*, X, no. 1 (1986): 157-170.

Hunter, Ian. “Commodity Chains and Networks in Emerging markets New Zealand 1880 – 1910,” *Business History* 79, no. 2 (2005): 275-304.

Jensen, Michael, and William Meckling. “Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure,” *Journal of Financial Economics* 3, no. 4 (1976): 305-360.

Jones, Geoffrey and Judith Wale. “Merchants as Business Groups: British Trading Companies in Asia before 1945.” *Business History Review* 72, no. 3 (1998): 367–408.

Kaukiainen, Yrjo. “Shrinking the World: Improvements in the Speed of Information Transmission, 1820–1870.” *European Review of Economic History* 5, no. 1 (2001): 1–28.

Klein, Peter, and Howard Shelanski. “Transaction Cost Economics in Practice: Applications and Evidence”, *Journal of Market Focused Management* 1, no. 4 (1996): 281-300.

Kling, Blair. “The Origin of the Managing Agency System in India.” *The Journal of Asian Studies* 26, no. 1 (1966): 37–47.

Knight, Geoffrey, "John Palmer and plantation development in western java during the earlier nineteenth century." *Bijdragen tot de Taal-Land-en Volkenkunde*, Deel 131, 2/3de Afl. (1975): 309-337.

Kranton, Rachel, and Anand Swamy. "Contracts, Hold-Up, and Exports: Textiles and Opium in Colonial India." *American Economic Review* 98, no. 3 (2008): 967–989.

Kulkarni, A.R. "Money and Banking under the Marathas: Seventeenth century to AD 1848," in *Money and credit in Indian History,* Amiya Kumar Bagchi (ed.). Delhi: Tulika Books, 2002.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny. "Investor Protection and Corporate Governance." *Journal of Financial Economics* 58, no. 1 (2000): 3–27.

Langlois, Richard. "Chandler in a larger frame: Markets, Transaction Costs, and Organizational Form in History," *Enterprise and Society* 5, no. 3 (2004): 355-375.

———. "Transaction-cost Economics in Real Time," *Industrial and Corporate Change* 1, no. 1 (1992): 99-127.

Lamoreaux, Naomi. "Constructing Firms: Partnerships and Alternative Contractual Arrangements in Early-Nineteenth-Century American Business." *Business and Economic History* 24 (1995): 43-71.

Lamoreaux, Naomi, Daniel Raff, and Peter Temin. "Beyond Markets and Hierarchies: Towards a New Synthesis of American Business History." *American Historical Review* 108, no. 2 (2003): 404–433.

Lamoreaux, Naomi, and Jean-Laurent Rosenthal. "Contractual Trade-offs and SMEs' Choice of Organizational Form: A View from U.S. and French history, 1830–2000." NBER Working Paper 12455 (2006).

Lamoreaux, Naomi, Jean-Laurent Rosenthal, Timothy Guinanne, and Ron Harris. “Putting the Corporation in Its Place.” *Enterprise and Society* 8, no. 3 (2007): 687–729.

Leonard, Karen. “Palmer and Company: An Indian Banking Firm in Hyderabad State.” *Modern Asian Studies* 47, no. 4 (2013): 1157–1184.

Llorca-Jana, Manuel. “The organisation of British textile exports to the River Plate and Chile: Merchant houses in operation, c. 1810–59”, *Business History* 53, no. 6 (2011): 821-865

O’Rourke, Kevin, Leandro Prados de la Escosura, and Guillaume Daudi, “Trade and Empire,” in *The Cambridge Economic History of Modern Europe, Vol. 1, 1700–1870.* Stephen Broadberry and Kevin H. O'Rourke (eds.). Cambridge: Cambridge University Press, 2010: 96-121.

Raff, Daniel**.** “How to do things with time,” *Enterprise and Society* 4, no. 3 (2013): 435-466.

Resor, Randolph. “Rubber in Brazil: Dominance and Collapse, 1876-1945.” *Business History Review* 51, no. 3 (1977): 341-366.

Roy, Tirthankar. “Indigo and the Law.” *Economic History Review* 64, no. 1 (2011): 60–75.

———. “Trading firms in Colonial India,” *Business History Review* 88, no.1 (2014): 9-42.

Rungta, Radhe Shyam. “Indian Company Law Problems in 1850.” *American Journal of Legal History* 6, no. 3 (1962): 298–308.

Sethia, Tara. “The Rise of the Jute Manufacturing Industry in Colonial India: A Global Perspective.” *Journal of World History 7, no. 1* (1996): 71-99.

Tarling, Nicholas. “The Palmer loans.” *Bijdragen tot de Taal- Land-en Volkenkunde*, Deel 119, 2de Afl. (1963): 161-188

Tirole, Jean. “Corporate Governance,” *Econometrica* 69, no. 1 (2001): 1-35.

Tomlinson, Tom. “The "Empire of Enterprise": Scottish Business Networks in Asian Trade, 1793-1810,” *KIU Journal of Economics and Business Studies,* 8 (2001): 67-83.

Van Driel, Hugo. “The role of middlemen in the international coffee trade since 1870: The Dutch case,” *Business History* 45, no. 2 (2003): 77-101.

Webster, Anthony. “An Early Global Business in a Colonial Context: The Strategies, Management and Failure of John Palmer and Co of Calcutta.” *Enterprise and Society* 6, no. 1 (2005): 98–133.

Wernerfelt, Birger. “The Resource-Based View of the Firm,” *Strategic Management Journal* 5, no. 2 (1984): 171-180.

Wilkins, Mira. “The History of the multinational enterprise,” in Alan Rugman (ed.). *The Oxford Handbook of International Business*. Oxford: Oxford University Press, 2009.

Williamson, Oliver. “The Modern Corporation: Origins, Evolution, Attributes.” *Journal of Economic Literature* 19, no. 4 (1981): 1537–1568.

———. “Market, hierarchies, and the modern corporation,” *Journal of Economic Behaviour and Organization* 17 (1992): 335-352.

Yates, JoAnne et al, “Distributed Work over the centuries: Trust and Control in the Hudson’s Bay Company, 1670 – 1826”, in Pamela Hinds and Sara Kiesler, (eds.). *Distributed Work*. Cambridge MA: MIT Press, 2002. 27-54.