



The Princely States v British India

Fiscal history, public policy and development in modern India

A Dissertation for the Degree of Doctor of Philosophy
Faculty of History

Antonia Strachey
Nuffield College

Hilary Term 2015

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Short Abstract

This dissertation examines how direct versus indirect rule shaped late colonial India through government finance. Fiscal policy has hitherto been overlooked in the literature on Indian economic history. This thesis considers how revenues were raised and spent in the Princely States compared with British India, and the welfare outcomes associated with these fiscal decisions.

Part One examines the fiscal framework through the neglected public accounts. The key finding is that while the systems of taxation were broadly similar in both types of administration, patterns of public expenditure were dramatically different. The large Princely States spent more public revenue on social expenditure. This was made possible by lower proportionate expenditure on security and defence. Part one charts these trends empirically and unearths political and institutional reasons for the differences in fiscal policy between directly and indirectly ruled India.

Part Two examines welfare. The study goes beyond previous anthropometric scholarship by assessing the impact of institutions and policies on biological living standards, deploying a new database of adult male heights in South India. Puzzlingly, heights were slightly lower in the Princely States, traditionally lauded for being more responsive to the needs of their populations, especially those of low status. The resolution to the conundrum is found in poorer initial conditions, and caste dynamics. Higher social expenditure and reduced height inequality occurred simultaneously in the States from the 1910s, suggesting policies directed at low status groups within the Princely States may have been successful. I also examine the consequences of Britain's policy of constructing an extensive rail network across the country. Importantly, the impact of railways differed by caste. Railways were good for High Caste groups, and bad for low status Dalit and Tribal groups. This suggests that railways served to reinforce the existing caste distinctions in access to resources and net nutrition.

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Long Abstract

This thesis examines the consequences of direct and indirect rule in late colonial India. Institutional differences of this type have recently been attracting the attention of development economists. In that literature historical institutional differences are examined for their potential to explain on-going geographical differences that persist to this day in economic, social and political outcomes. This study examines the impact of these institutions in their own time. In the historical literature on colonial India, the indirectly ruled regions, also known as the Princely States, have received much less attention than directly ruled British India. In particular, public policy and economic and social outcomes have hardly been explored for these regions. In this thesis I address both of these areas: public policy, and economic outcomes. Part one explores the differences in fiscal policy between the two types of administration. Part two compares economic outcomes by comparing living standards in both types of region.

This historical examination is built upon a foundation of important but neglected sources on the public revenues and expenditures of three large Princely States: Hyderabad, Mysore and Travancore. Long series of data are available for each of these large States. The analysis also includes fragmentary public finance data from other, smaller, States which have more patchy historical records. These sources have been assembled from the records kept by individual Princely administrations and held in archives in India and the UK. One reason that these records have been neglected hitherto is that they are separate from those of British India and are often filed under different titles from the comparable British Indian records.

In the late nineteenth century the tax structure was similar in British India and the large Princely States. The British Indian fiscal system was structured in this period in accordance with liberal political economy which emphasized minimal government activities aside from the maintenance of law and order, defence and a firm adherence to free trade. The large States conformed to a similar model of narrow government activities in this early period though there were signs in the statements made by Travancore officials that this State in particular was becoming more sympathetic to government involvement in social expenditure.

In the early twentieth century customs tariffs on international trade became more common across the world, though not within the British Empire, after World War One. Certain powerful groups lobbied against the vocal demands from within India that it too should raise customs tariffs and move away from its traditional free trade policy. India did raise tariffs several times in the inter-war period as budgetary need following high wartime expenditure combined with nationalist calls for the move. However, this created a new internal controversy in India over the distribution of the expanding revenues from customs. The Princes wanted their share of the bounty, which mostly remained in the hands of British authorities who administered many of the coastal trading ports where customs were collected. As a result, the States were unable to readjust their tax base away from traditional taxes such as land revenue at the same rate as was taking place in British India.

From the end of the 1930s the British Indian authorities were faced with the financial challenges of rearmament and war. In a poor country where many of the traditional sources of tax revenue were declining in real value, new sources of revenue were required to face these new challenges. This resulted in an expansion of direct taxation such as income tax in the last years of colonial rule. The States followed suit albeit at a slower pace.

Though the States complained of the erosion of their tax base resulting from the collection of customs by the British, nevertheless, they undertook a significant readjustment of spending policies over the first decades of the twentieth century. All of the three large States significantly increased their expenditure on social programmes such as education and health, though Mysore and Travancore did so to a greater extent than Hyderabad. Meanwhile in British India there was very little change in the expenditure side with defence and security dominating the public fisc. This was associated with superior educational outcomes in States such as Travancore and Mysore than in British India.

Other areas of expenditure, aside from social expenditure, remained important to a similar extent in the large Princely States and British India. In both types of regions administration absorbed a large proportion of public resources. The States had the additional burden of supporting Royal families. These were characterized by the British as spendthrift and indolent. That representation is supported by the data analyses here only in a few cases, generally in small States in the North of India. However, in the large States the Royals commanded a small and declining proportion of public funds in the early twentieth century.

How were the States able to finance their greater social expenditure? They did not appear to economise on administrative expenditure. One possibility is that they simply taxed their citizens more heavily than in British India. Using a recently developed method of estimating tax extractiveness, I find no evidence to support the hypothesis that the States taxed their citizens more heavily than British India.

The answer to the puzzle over the States' higher social expenditure comes in the analysis of security and defence expenditure. A key difference in the fiscal

systems of directly and indirectly ruled India was the method of financing defence. The States were bound to make fiscal contributions to British India known as 'tributes' or 'subsides' to contribute to the cost of Indian defence. The amounts of these tributes were set in nominal terms in the treaties with the East India Company. Though initially some of these tributes were very burdensome, especially for Mysore state, their real value was undermined by inflation. By the early twentieth century the value of the tributes was low which translated into a low proportion of public expenditure on defence in the Princely States. In British India defence expenditure ballooned in the Second World War period to over sixty percent of total expenditure but it had been the largest form of public expenditure in directly ruled India from at least the end of the nineteenth century. In the States, however, defence expenditure was limited to the tribute contributions. These not only declined in real terms, but were set down in treaties and therefore inflexible to sudden changes in circumstances such as world wars. The tribute system acted in practice as a tight cap on defence expenditure in the States, which gave them the opportunity to spend on social programmes in the way they did.

Another area in which the State government spent a lower proportion of public income than did British India was on internal security. Though some Indian monarchs and Dewans engaged in repressive policies, this did not compare with the resources British India dedicated to police and jails. As Congress became increasingly active in the 1920s and 1930s the difference grew with British India dedicating a growing share of resources to internal security.

Wartime presented particular challenges for the Indian economy and its citizens. Inflation was high and food prices rose particularly fast. The starkest outcome of this was the 1943-44 Bengal famine. The British Indian administration in Bengal was criticized at the time and in subsequent scholarship for making insufficient efforts to secure the food entitlements of its citizens. An overlooked case study from the same period in the South of India shows a different official approach to food distribution issues. Travancore State introduced a more comprehensive rationing system than in any other part of India. In the years after the war it embarked on an ambitious food subsidy system, which accounted for almost 17% of public expenditure in 1948, a unique episode in early twentieth century fiscal history.

Part Two of the thesis continues the theme of food and nutrition but with a different set of methodologies. This part of the thesis analyses data on outcomes, rather than policies. It uses an original source of anthropometric data from late colonial South India. The anthropometric data used are a large sample of adult male heights, which completes earlier work by Guntupalli and Baten to provide near complete geographic coverage of anthropometric trends in India in this period. It is found that earlier results of a stagnant trend in heights for other regions of India also hold in south India in this period. The study goes beyond previous anthropometric scholarship by assessing the impact of institutions and policies on biological living standards.

Analysis uncovers that the type of colonial ruled had important effects on health outcomes but are mediated by caste. I find that in the Princely States, mean height is slightly lower than in British ruled India. This seems a puzzling

finding, since much of the secondary literature praises the southern states as being more responsive to the needs of their populations, especially low status groups. The resolution to the conundrum is to be found in initial conditions and change over time. There is some evidence that the British directly ruled the most prosperous regions, leaving Princes in place in localities with poorer resource endowments. I find greater reductions in height inequality from the 1910s, suggesting that policies directed at low status groups within the Princely States may have been successful. I also examine the consequences of Britain's policy of constructing an extensive rail network across the country. Importantly, I find that the impact of the railways differed by caste. Railways are associated with increases in the mean height of High Caste groups and Brahmins. However, they are also associated with a decline in the mean height of low status Dalit and Tribal groups. This suggests that railways served to reinforce the existing caste distinctions in access to resources and net nutrition. British influence in India, both through direct rule and railway construction, exacerbated inequality.

Both parts of the thesis indicate that public policies in the States differed from British India and that this may well have had an impact on Indian living standards, leaving an indelible mark in human form. The anthropometric data support findings from other studies that the geographical endowments in the States were worse than in British India. In other words, the areas annexed by the British were, in general, the most agriculturally fertile regions with better living standards. Nevertheless, the data analysed here indicate that not only did the large South Indian States target more public resources to social expenditure, but that they also achieved better outcomes than British India both in terms of reducing inequality in the standard of living, and in terms of measures of education such as numeracy. It is hoped that this analysis provides impetus for further exploration of the distinctiveness of the political economy of the Indian Princely States and the link to social development from the colonial period to today.

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Glossary

Avarna	From Sanskrit, meaning those without <i>varna</i> or caste.
Brahmin	The highest of the four <i>varnas</i> , traditionally priests by occupation
Coir	coconut husk fiber
Crore	ten million
Dalit	a member of the lowest caste, those historically regarded as untouchable
Dewan/Diwan	treasurer. Came to be used to mean civilian prime minister of a Princely State
Hartal	A strike as a form of protest
Jagirdar	holder of a land grant
Jati	sub-caste
Kshatriya	the second highest of the four <i>varnas</i> , traditionally warriors by occupation
Lakh	one hundred thousand
Lascar	a local sailor
Lathi	A long bamboo stick used as a weapon
Nizam	ruler
Ryotwari	land tenure system in which cultivators pay land revenue directly to the government
Ryot	peasant
Sepoy	a local soldier
Sudras	the lowest ranking of the four <i>varnas</i> , traditionally labourers by occupation
Vaishya	the third highest ranking of the four <i>varnas</i> , traditionally merchants and farmers
Varna	the four main groups within the caste system
Zamindari	land tenure system in which the landlord is responsible for collecting land revenue from cultivators and remitting it to the government

Thesis Introduction

British imperial policy cleaved India in two. There was direct colonization in 'British India', but elsewhere imperial power was exercised via Princes in their States. India is an unusual case in colonial history of a prolonged period of indirect rule. Indirect rule modeled on the Indian system was used as a temporary measure at the beginning of British colonization in some parts of Africa for instance it was used in areas of Northern Nigeria¹. However, nowhere else in the world has had such a prolonged and stable system of indirect rule, over such a large geographical area as in the case of the Indian Princely States. The map in Figure 1 overleaf illustrates the extent of British India (pink) and the Princely States (yellow). Many of the royal families in the States were in place from before the British arrival and remained until independence in 1947.

While much scholarly ink has been spilt on the history of British India, rather less is known of the Princely States. Yet it should not be expected that the two forms of administration were identical, or even closely aligned, in terms of endowments, populations, ambitions, policies, civil service capacity, efficacy, or human outcomes. Analysis of the political economy decisions in colonial India have largely been confined to British India, which has been included in recent

¹ The model of indirect rule developed in India was used as a basis for later colonial administrations in Africa and the Middle East. The Princely States were explicitly cited in the House of Commons as the basis of the reform of the British regime in Egypt. In the twentieth century, the Indian indirect rule system framed the outlook of the British in its dealings in the Middle East. The old British outposts in the Middle East had always fallen under the jurisdiction of the India Office and that branch of Government had great influence over British policy in the region as a whole. See also Fisher, *Indirect Rule in India: Residents and the Residency System 1764-1858*, Delhi, Oxford University Press, 1991, p459

cross-colonial studies of tax policy². What is missing is the fiscal history of the Princely States and a deeper understanding of living standards in these indirectly ruled regions. Tirthankar Roy, an expert on Indian economic history, described the study of the fiscal policy of the States as a “complex and little-known subject”³. Directly and indirectly ruled India may have reached very different resolutions to the problem of how to gather and expend public resources.

² Frankema, ‘Raising Revenue in The British Empire, 1870-1940: how ‘Extractive’ were Colonial Taxes?’, *Journal of Global History*, Vol.5, 2010, pp.447-477

³ Roy, T., *The Economic History of India 1857-1947*, Delhi, Oxford University Press, 2000, p329

Figure 1.1: Map of Directly and Indirectly Ruled India



British India is pink, Princely States are yellow.

Source: *Imperial gazetteer of India*. New edition, published under the authority of His Majesty's Secretary of State for India in Council. Oxford: Clarendon Press, 1907-1909

Indirectly ruled India was loosely tied to the British administration by treaties made with Indian princes and these relationships were managed by the Political Service, a branch of the Indian Civil Service (ICS). Indirectly ruled India was referred to as *the Native States* or *the Princely States*. The treaties were originally contracted between the East India Company and the Indian Princes. Under the terms of these treaties, the Princely States ceded the control of their external relations and their military policy to the British. However, the large

States, which are of most concern in this study, retained a great degree of control over their internal policy making. Indirectly ruled India comprised around a fifth of India's total population. In 1921 the total population of the States was roughly 63 million compared to 306 million in British India⁴.

Indirect rule was systematized and persisted because it required less of the colonial state. The States collected their own revenue, ran their own administrations and provided their own public services. The main public good provided by British India for all of India was defence, for which the States paid an annual tribute. In the years after 1857, the British halted their campaign of territorial expansion in India and guaranteed the future of the remaining Indian States within a system of indirect rule. This was partly motivated by the financial constraints on British India at that time after the huge expense of combatting the 1857 mutiny-revolt.

In their relations with the States from the mid nineteenth century the British advocated the introduction of similar policies to British India. Namely, a 'night-watchman' type state with light taxation and a minimal set of public functions. However, the British had little capacity or will to enforce this, especially in the large States, which had significant domestic legitimacy. As a result, policy making in the States diverged in important ways from that of directly ruled India.

⁴ Census of India 1921

The different models of colonialism, direct and indirect, and their long-term impacts are increasingly a focus of scholarly attention⁵. Economists have used evermore ingenious statistical methods to pinpoint the ongoing impact of different colonial institutions on modern economic growth and human development. Several modern studies have shown the long-term importance of historical social expenditure by the state on modern development outcomes⁶. Within this literature a famous paper has highlighted the distinctiveness of the policy decisions of indirectly ruled India. Iyer's recent paper uses advanced econometrics to demonstrate that development outcomes in Indian regions today are better in formerly indirectly ruled regions and that this is a legacy of this particular set of historical institutions.

However, her analysis of fiscal policy is fairly crude. She uses an 1896 published compendium containing per capita public revenue information for the States in that year, her only measure of fiscal policy. This ignores the differences in types of revenues and expenditure between the States and British India and between the States themselves. Iyer suggests that the threat of annexation provided the motivation for superior governance in the States and that this caused the long-term differences in development outcomes between direct and indirectly ruled India⁷. The evidence presented here in this study uncovers other

⁵ For some of the most important contributions to this literature see: Acemoglu, Johnson and Robinson, 'The Colonial Origins of Comparative Development: An Empirical Investigation', *American Economic Review*, Vol.91, No.5, 2001, pp.1369-1401 and Banerjee and Iyer, 'History, Institutions, and Economic Performance: The Legacy of Colonial Land Tenure Systems in India', *American Economic Review*, Vol.95, No.4, 2005, pp.1190-1213

⁶ For a study on this in the African context see Huillery, 'History Matters, The Long-Term Impact of Colonial Public Investments in French West Africa', *American Economic Journal: Applied Economics*, Vol.1, No.2, 2009, pp.176-215

⁷ Iyer, 'Direct Versus Indirect Colonial Rule in India: Long-Term Consequences', *Review of Economics and Statistics*, Vol. 92, No.4, 2010, pp.693-713

potentially important fiscal differences that are masked by Iyer's chosen measure of fiscal policy.

Part One of the dissertation is a study of the fiscal systems in indirectly ruled India. The Princely States operated within constraints, on the one hand from the British Indian government motivated by imperial concerns for stability and security, and on the other, from growing internal demands from their citizens for improved public services. Using archival material from Britain and India, this study provides a comparative examination of fiscal policy in British India and three of the largest Princely States: Hyderabad, Travancore and Mysore. Quantitative public finance data are collected for all four regions. Travancore has the best qualitative information giving deeper insight into the policy making process in that State. These sources are collected here for the first time.

Part Two of the thesis examines differences in human outcomes between directly and indirectly ruled India, focusing on the same States as in Part One: Hyderabad, Mysore and Travancore. Little is currently known about the differences in living standards between British India and the Princely States. This is partly because very little wage data of the type commonly used by economists to estimate living standards is available from the Princely States. This second part of the thesis uses a new anthropometric database of South Indian heights covering both directly and indirectly ruled India. Earlier work by Guntupalli and Baten has investigated biological outcomes in northern India in

the early twentieth century⁸. Their main findings are that mean male heights stagnated in that part of the country and that inequality in height between different castes was less pronounced than they anticipated in such a hierarchical society. This part of the thesis adopts a similar methodology for South India, completing the coverage of anthropometric studies of this period of Indian history. This study goes beyond the existing anthropometric scholarship by examining the impact of types of colonial institutions, as well as the impact of one of the most important colonial infrastructural investments on living standards: railways. Rail links were built across both types of administration. They were one of the aspects of colonial rule most celebrated by the British as a vehicle of expanding free trade across India. Conversely, they were attacked by certain independence leaders as a tool of colonial exploitation.

The objectives of this dissertation are to investigate how the composition of tax revenues and public expenditure differ in directly and indirectly ruled India. Did the Princes raise different types of taxes? Did they have different priorities for public expenditure? If there were fiscal differences, how did they come about? Finally, how were the two main types of colonial rule related to biological living standards? Were biological living standards affected by caste in South India in the same way as in the North? Finally, what was the impact on living standards of one of the public policies that cut across directly and indirectly ruled areas, the railways?

⁸ Guntupalli, A. and Baten, J., 'The Development and Inequality of Heights in North, West, and East India 1915-1944', *Explorations in Economic History*, Vol. 43 (No. 4, 2006), 578-608.

Part 1. Fiscal Policy in India:
1909-1947

Introduction to Part 1

How did the fiscal policies of India differ between British ruled and Indian ruled regions? This part of the thesis investigates the tax raising and public spending policies of British India and three of the largest Princely States.

Three of the most populous Princely States in India were in the South; Hyderabad, Mysore and Travancore (see Table 1.1 below)¹. Landlocked and located in the far Northeast of the region, Hyderabad was the largest. Hyderabad was the only southern Princely state to have been part of the Mughal Empire, which dominated most of India before the arrival of the British. The leaders of Hyderabad were Muslim Princes, or Nizams, ruling a largely Hindu population. In Hyderabad, the court language was Persian, as it had been for the Mughals. The high officials considered themselves to be direct inheritors of the Mughal Empire and attempted to preserve their State from external cultural and political influence.

Table 1.1: Southern Princely States Basic Information

Native State	Area (sq. miles)	Population in 1896	Religion of Ruler	Number of Guns in Salute
Hyderabad	98,000	9,845,594	Muslim	21
Mysore	24,723	4,186,188	Hindu	21
Travancore	6,730	2,401,158	Hindu	19
Cochin	1,361	600,278	Hindu	17

Source: Data adapted from Iyer., ‘The Long-term Impact of Colonial Rule: Evidence from India’, *The Review of Economics and Statistics*, 152, 2010, p710. N.B. Mysore was annexed by the British between 1831 and 1881.

¹ Jeffrey, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992), p26.

One of the ways in which the British ranked a State's importance was the number of guns in an official salute. Hyderabad was one of the few States with the maximum 21 guns in its salute.

Hyderabad was unusual in that its Prince was Muslim while the majority of the State's population, 85%, was Hindu². This generated tensions as Muslims tended to be overrepresented in the administration. There were also tensions between officials from the country (*Mulki*), and those from outside (*non-Mulki*), who were another group that tended to be favored in administrative appointments. These tensions were present in the nineteenth century and continued up to 1947³.

The next largest State in the South was Mysore. Located West of Hyderabad it had been founded in 1399. Like Hyderabad, Mysore received the maximum of twenty-one guns in its salute. The Muslim ruling dynasty had a troubled relationship with the British. After three wars against the colonists, the last being in 1799, the British finally triumphed. Several Mysorian lands were annexed to the British, while the core Mysorian lands became the Princely State of Mysore⁴. After a period of unrest in the early nineteenth century, Mysore was briefly directly ruled between 1831 and 1881 on the grounds of maladministration. It became a Princely State once more in 1881⁵.

² There were some other instances where the ruler was of a different religion to the majority of his subjects. The most notable case was Kashmir in which around 80% of the population were Muslim (in 1941) and the Maharaja was Hindu.

³ Leonard, "Hyderabad: The Mulki-Non-Mulki Conflict" in Jeffrey (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978

⁴ Ramusack, B., *Indian Princes and their States* (Cambridge: Cambridge University Press, 2004), p67.

⁵ *Ibid*, p106.

Travancore was a largely Hindu state, ruled by Hindu Princes. In the State matrilineal practices were widespread with mother to daughter inheritance practiced by prominent high castes like the Nairs as well as the Royal family. As well as having widespread matrilineal practices, Travancore and the neighbouring tiny State of Cochin had relatively high levels of literacy, including female literacy, from when official records begin in the second half of the nineteenth century. Travancore had a highly diverse population. The rulers of Travancore had a semi-divine status and were seen as the custodians of Hinduism by their majority Hindu population⁶. The communal issues in this State were very different from the Hindu-Muslim tensions common in the rest of India. There were three main social groups in Travancore, Hindus, Christians and Muslims with the first two being the most powerful⁷. There was an ancient and powerful Christian community in the state. From the nineteenth century the numbers of Christians was growing as a result of significant missionary activity⁸. This State also had a particularly extreme form of untouchability, which extended to unseeability. For higher castes the groups deemed 'unseeable' were polluting only by sight and they suffered from a wide range of restrictions in the nineteenth century such as not being allowed to use public roads. Around two

⁶ Jeffrey, R., 'Travancore: Status, Class and the Growth of Radical Politics, 1860-1940' in Jeffrey (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p138

⁷ The Christian community in South India was concentrated in northern Travancore and in Cochin State. Elements of the Christian community claim a history dating back to St Thomas the Apostle. There were also significant Syrian Orthodox and Catholic communities in Travancore.

⁸ Kawashima, K., *Missionaries and a Hindu State: Travancore 1856-1936*, Oxford University Press, New Delhi, 1998, p55

fifths of the population in the early twentieth century were designated 'untouchable'⁹.

In Travancore and Cochin, there was yet another dynamic fostering social change. Travancore in particular was home to a Syrian Christian community, which has been present in South India for more than one thousand years. In the eighteenth century it became a focus of European missionary attention because of the large minority of indigenous Christians¹⁰. Kawashima argues that the turning of state attention to education was precipitated in Travancore by the significant resources channeled into local schools by the missionaries. Concerned that Hindu values might lose out compared with Christianity, both the State and Hindu religious organizations had an incentive to compete for students by creating their own educational institutions¹¹.

The Princes have often been presented as feudal, backwards and resistant to change. The colonial officials also regarded them as exotically extravagant, with fine jewels and large palaces. Some historians have similar views. Dirks's study of the tiny south Indian State of Pudukkottai refers to the Prince as a 'hollow crown', vainly focused on ostentatious ceremony. For Metcalf too, the princes were purposeless figureheads, propped up by the British and free to engage in self-indulgent behavior¹². Another strand of scholarship, has argued the opposite. Rather than simply being indigenous collaborators with the

⁹ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p92

¹⁰ Kawashima, K., *Missionaries and a Hindu State: Travancore 1858-1936*, (New Delhi: Oxford University Press, 1998), p54.

¹¹ *Ibid*, p112-3.

¹² Metcalf, T., *Ideologies of the Raj (New Cambridge History of India)*, Cambridge, Cambridge University Press, 1997, p198-199, and Dirks, *The Hollow Crown: An Ethnohistory of an Indian Kingdom*, University of Michigan Press, 1993

colonial regime, the Princes of large States, according to this new school, were sensitive to the demands of their citizens and engines of a distinctive 'native modernity'¹³.

The key financial aspect of the relationship between British India and the States was the British Indian commitment to provide defence for the whole of India, including the States. The States' contributions to the cost of Indian defence were defined by the treaties. Those treaties also imposed limitations on the ability of the States to deviate from certain British Indian taxation policies such as customs. In this way the treaties defined the scope of States' autonomy in financial policy making, but left wide areas in which the Princes could exercise independence, most notably in the allocation of public expenditure. Since they were rarely altered, the arrangements set down in the eighteenth and nineteenth century treaties defined the financial relationship between the States and British India throughout the colonial period.

The first chapter of the study addresses the public finance policies in the States and in British India in the late nineteenth century. It describes the linkages between the fiscal systems of directly and indirectly ruled India. These links were established by a system of treaties under the East India Company. The attitude of the British to the States and the policy changes impacting these relationships in this early period are described.

Chapters 2 and 3 focus on the period between 1909 and 1938, concentrating on revenue and expenditure, respectively. In 1909 there was a

¹³ Bhagavan, M., *Sovereign Spheres: Princes, Education and Empire in Colonial India*, Oxford University Press, New Delhi, 2003, p8

shift by the British towards limiting any interference in the States marking a new phase in British-States relations. This period encompasses the depression and India's slow economic recovery. Also in this period India moved away from its nineteenth century policy of free trade, introducing more customs tariffs. This too had an important impact on the political and financial relationships between directly and indirectly ruled India. Expenditure patterns in the States changed significantly in this period, most notably in the declining importance of both the tribute payment to the British and the expenditure on Royalty while expenditure on health and education increased significantly.

The fourth chapter covers the period from 1938 to 1947. In 1938 there was widespread political unrest across the States as citizens agitated for greater political representation and institutional reform. At the same time, British India was facing a highly organized non-cooperation movement led by Congress's key leaders Mahatma Gandhi and Jawaharlal Nehru. This presented both regions with significant internal security challenges, which are explored. In this period the taxation system too changed in important respects in British India and in some of the large States. Direct taxation became an important feature of the fiscal system for the first time. The Second World War radically changed the pattern of public expenditure in British India. Defence expenditure was always high in directly ruled India but it dominated to an even greater extent in this period. Meanwhile, the States escaped a similar radical change in their public finances, allowing them to maintain their expenditure on social investment.

Modern scholarship has found lingering positive development impacts of Princely Indian institutions when compared with British rule in India. Part one

of this thesis explores whether public policies differed significantly in the late colonial period between these types of regions. The aim is to deepen our understanding of the origins of this intriguing pattern.

Data and Methodology

British Indian public finance data are used at the aggregate, not the provincial, level throughout the study for two reasons. The first is that before 1919, Provincial revenue and expenditure were not recorded separately from that of the central government. Secondly some of the most important State activities in British India happened at the national level, for instance defence, and therefore cannot be meaningfully divided between the Provinces. Therefore, public finance data for British India as a whole are used throughout.

The standard sources of British Indian public accounts data do not include information on the States. There exists a body of public accounts kept by the medium and large sized States. Very little reference has been made to these sources in the literature to date. These sources are sometimes fragmentary and often have titles that disguise the valuable public accounts information contained within. For most of the large and medium States a substantial series of these official publications exist. The body of available information was so large, not all of it has been exploited for this study. This study focuses on three of the largest States for which long series of good quality public accounts data were available: Hyderabad, Mysore and Travancore. Travancore has the best quality public finance records extending back into the third quarter of the nineteenth century. In addition, the Trivandrum University library holds near complete series of the *Statistics of Travancore*, an official publication containing price and

wage data, which I have also used. The high quality of Travancore's records reflects the State's early advances in education, which facilitated information gathering and organization. Additional fragmentary data are included on other States including Alwar, Bharatpur, Rajkot, and Cochin. Some of the records from smaller North Indian States were partially in Hindi, which I have translated.¹⁴ This study is the first work of comparative fiscal history of directly and indirectly ruled India. The richness of archival records from the States indicates that this is a fertile area for future scholarship.

The States largely used British Indian accounting methods, for instance, in dividing data into revenue and capital accounts. This means that the public accounts information from all the regions included in the study are comparable in this respect. Budget reporting by the States to the British, in the form of locally produced 'administration reports' was introduced in the nineteenth century to enable the colonists to monitor the finances of the States. The large States complied early. As a result, excellent budget data exist for them. Many of the small States did not and, in fact, complained at being asked to submit their accounts to the British.

One problem faced by historians of colonial India is the lack of available contemporary qualitative sources from Indian citizens. This applies both to British India and the States. The sources of this type that do exist tend to be from educated, literate Indians who left written documents behind them. Travancore again provides a rich seam of such sources. The proceedings of the budget sessions of the State's legislature survive in the Kerala State Archives and have

¹⁴ My thanks to the Landour Language School at Mussoorie in Uttarakhand for advanced language training, and to the ESRC for financing my studies there.

been included in the analysis¹⁵. One useful surviving record on Congress thought on fiscal issues is a 1938 Congress sponsored pamphlet on British Indian fiscal policy which critiques the colonial system of public finance¹⁶. In addition there are some useful accounts of political events in early twentieth century States. Of particular note is Louise Ouwerkerk's account of political life in Travancore between 1921 and 1947. She worked at the Travancore University and knew many of the protagonists in the world of Travancorean high politics.

Generally in both British India and the States recurring expenditure is funded by tax revenues not by debt. For this reason this study focuses on expenditure driven by revenues and not debt financed expenditure. This excludes the capital account, which was largely used for investment in overhead capital projects such as railways. For this reason, the discussion also largely excludes railways and irrigation. In British India railways were financed both by the public and private sectors¹⁷. There is much space for future research on this important issue, which involves private companies, international firms and banks as well as public finance. Another reason for treating this issue in a separate study is that whole other areas of expenditure are consistently presented in gross form, railways and public enterprises are presented net of expenses. It was also common for these government investments to be financed by loans, making the funding of these items of expenditure connected to private capital markets, which are also outside the scope of this study.

¹⁵ The language of government in Travancore was English rather than the local vernacular, Malayalam. As a result, the state's records were almost entirely written in English. Even the state's laws were drafted in English before being translated into Malayalam.

¹⁶ IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938

¹⁷ For more on the financing of Indian railways see Sweeny, S., *Financing India's Imperial Railways*, 2011, London:Pickering and Chatto.

In the discussion, the years referring to public finance data are financial years covering a period from April to April. In all cases I use the first year for simplicity, for instance, the budget of 1937-38 is referred to as the 1937 budget. Throughout numbers are presented in the Indian format based on the locally used units of lakhs (hundreds of thousands) and crores (tens of millions). This means that one hundred thousand is written 1,00,000 rather than in the western format 100,000.

Chapter 1. The Origins of the Indian Fiscal System: 1870-1909

Treaties and British-States Relations

The foundations of the system of indirect colonial rule in India stem back at least to the East India Company period¹. The East India Company expanded its influence over the Indian sub-continent in the eighteenth century and the first half of the nineteenth century, the period in which the power of the central Mughal government was declining. One way it achieved this was to annex and directly administer territories as it did in places such as Bengal and Oudh. The other method was to negotiate treaties with local potentates. In the early nineteenth century, the prime goals of these treaties was to deny territories to the French, to expand the Company's sphere of influence and to secure access to new markets. These treaties largely related to military issues. A late nineteenth century reference work describes the beginning of the treaty system of indirect rule in India:

... it was the French who first devised in 1751 the plan of guaranteeing protection to an Indian Ruler by providing a "subsidiary" force, the maintenance of which was financed by cash contributions or the cession or assignment of specified territories. European military science and discipline were the dominant factors in evolving order out of the chaos of the times. Thus it came about that, as one State after another entered the British system of alliances, they were required to contribute money or to cede territory for the maintenance of troops officered and disciplined by the Company's military establishment...²

Treaties involving British provision of military protection in return for a subsidy were made by the East India Company from the 1760s, beginning with

¹ The East India Company was founded in 1600 and was granted permission from the Mughal government to trade in India in 1619

² Report of the Indian States Enquiry Committee (Financial) 1932, HM Stationary Office, London, p11-12

Hyderabad State. The States were prevented by the treaties from maintaining a military force beyond a certain size. This was true in the cases of Mysore, Gwalior and Cochin among others. Lee-Warner, a senior British Indian Civil Service (ICS) member summarises the limits on the States' militaries imposed by the treaties:

...the following principles are generally applied. The armies of the Native states must not exceed in time of peace what is required for the maintenance of reasonable dignity of the Chief, the enforcement of internal order, and the requirements of the special engagements which they have entered into with the British Government³.

The States were also limited in their right to construct fortifications and to import 'material of war'⁴. The rulers of the States were prevented from receiving commercial officers from other countries as well as from receiving honors from foreign governments⁵. In addition, the treaties usually committed the States to bearing the cost of a body of Company trained troops. These troops were notionally for the States' own defence, but would also be on hand to defend the Company's interests if required. The funds provided by the States to pay for these troops were referred to as a 'tribute' or 'subsidy' payment. The Travancore treaty is an illustrative example of the tribute provisions in the treaties:

In 1795 the Rajah concluded a treaty by which he engaged to pay an annual subsidy adequate to maintain three battalions of sepoy together with a company of European artillery and two companies of lascars to be always stationed, if the Rajah desired it, in his country or on the frontiers near it...By a subsequent Treaty of 1805 his successor agreed to pay annually, in addition to such subsidy, a sum adequate to maintain one more regiment of the East India Company's native infantry and... to contribute such a sum as should appear to bear a just and reasonable proportion to his net revenues...⁶

³ Lee Warner, *Native States*, p240

⁴ Lee Warner, *Native States*, p242

⁵ The Imperial Gazetteer of India, Vol.4, 1909, p84

⁶ Aitchison, *A Collection of Treaties, Engagements and Sunnuds Relating to India and Neighbouring Countries, Volume V*, British Foreign Office Press, 1876, p419-420

Eventually the subsidy payable by the Travancore State was fixed definitely at 8,00,000 rupees per annum. Although the treaty makes reference to the tribute forming only a 'just and reasonable' proportion of the State's net revenues, there was no mechanism in place to ensure this occurred in practice. In fact the tribute commitments of the States under the East India Company were often painfully high. In many cases Princes struggling to meet the payment extracted more resources from their local allies, destabilising their legitimacy and their power⁷.

The amounts paid in tribute were revised in the nineteenth century in many cases commuting in kind military contributions to cash. At this time detailed statistics on the economies and public finances of the States were unavailable. Even after these revisions, there was a bewildering array of different tribute arrangements. The Report of the 1932 Indian States Enquiry Committee lists seven different types, which, even then, did not include them all. A common feature was that most provided for a financial contribution from the State to the British⁸. The result of this diverse and rather haphazard system was that the level of tribute set was often fairly arbitrary. This led to wide variations in the level of tribute from State to State and ongoing controversies with some States who felt their tribute was unfairly high. The most notable example of this was Mysore who submitted repeated requests to the British to reduce the State's large subsidy payments from the 1890s up to independence in 1947.

⁷ Bose and Jalal, *Modern South Asia: History, Culture, Political Economy*, Oxford University Press, Delhi, 1999, p62

⁸ Report of the Indian States Enquiry Committee (Financial), 1932, HM Stationary Office, London, p19

The treaties also covered commercial issues. In the mid nineteenth century the States were treated as foreign countries in terms of customs duties. For instance, goods from Travancore imported into British India were charged the same customs as those from other foreign countries and the same was true in reverse. The Princely States needed permission from the British to issue debt publicly in India or Britain⁹. Though this influenced the States freedom in tax raising powers, in the arguably more important arena of public expenditure the states were free to develop their own policies, as described in later chapters.

The States' treaties stipulated some formal constraints on their ability to raise indirect taxes. The terms of these arrangements varied from State to State but mostly related to customs, salt and opium. For Travancore and Cochin, the most important agreement with the British relating to taxation was the 1865 Interportal Trade Convention. Under the terms of the Convention Cochin abolished its monopoly on tobacco, its internal transit duties, agreed to apply the same customs duties as those obtaining in British India and to sell salt at the same rate as the neighbouring British Indian district of Malabar. The British, for their part, committed to giving the State a fixed annual guaranteed customs revenue of Rs 1,10,500. As for Travancore, it retained the power to impose customs duties on tobacco alone but otherwise lost its ability to impose import tariffs. It retained the right to impose export duties, which it consistently used on its traditional export goods such as pepper and coir fibre ¹⁰.

⁹ Ramusack, B., *The Indian Princes and Their States*, 1st ed. Cambridge: Cambridge University Press, 2003, p191

¹⁰ The Travancore and Cochin regions of South India have an ancient trading history. Black pepper is native to this region and was exported to Roman Europe via Arab merchants. For a time the spice was known as 'black gold' because of its high value.

Although the Princes were relatively secure in their territories in the period after Queen Victoria's 1858 Proclamation and the end of the annexation policy, there were other, more subtle ways, in which the British exerted control over those regions' economies. One of these was by negotiating the closure of mints and the abolition of States' currencies. Gradually the British Indian rupee became the only legal tender in most States. This also denied States revenue associated with seigniorage. Only a few of the largest and most powerful States, such as Hyderabad and Travancore, retained the use their own currencies on a large scale¹¹. Many States resented the loss of their monetary independence as well as the revenues from their mints. The Report of the Indian States Committee (Butler) of 1927 states

There are few subjects on which States feel more strongly than in regard to mints and currency. In the course of the last half century much pressure has been brought to bear upon States, especially during minorities, to close their mints and to accept the Imperial currency.¹²

Another British policy was to limit the production and export of salt by the States. This too was largely a fiscally motivated policy. Salt was a government monopoly in British India and revenues from its sale were an important source of public revenue in the nineteenth century. By expanding control over salt into the Princely States, the British also secured revenues from salt produced in British India and sold in the States. Travancore and Cochin were both in the unusual position for States as they retained the right to produce their own salt. The salt tax became an important political issue around which agitation would later mobilise under Gandhi. The terms of the 1865 agreement

¹¹ D'Souza, *Financial problems of the States in Federal India*, Bangalore City, Bangalore Press 1935, p41-2

¹² D'Souza, *Financial problems of the States in Federal India*, Bangalore City, Bangalore Press 1935, p39

defining Travancore and Cochin's salt producing rights commits them to selling salt at the British Indian price. These two Southern States also had the right to import additional salt from British India duty free. Some other States also retained this ability, such as Jaipur with its large salt lake, but most acceded to agreements in the nineteenth century to import taxed salt from British India whereby the salt purchases of States' citizens would benefit the British Indian treasury.

The motivations for maintaining two such different systems of administration in India, direct and indirect, were multiple. The view of Elphinstone, Governor of Bombay 1819-1827, was that direct rule by the British was a much superior system than that of indirect, princely rule. However, maintaining both systems was useful, according to his view, because Indians observing the superiority of British government would be more loyal to the colonial Government. He wrote in evidence to the Select Committee on the East India Company in August 1832:

It appears to me to be in our interest as well as our duty to use every means to preserve the allied [Indian] Governments. Their territories afford a refuge to all those whose habits of war, intrigue or depredations make them incapable of remaining quiet in ours; and the contrast of their Government has a favourable effect on our subjects, who, while they feel the evils they are actually exposed to, are apt to forget the greater ones from which they have been delivered.¹³

In the middle of the nineteenth century, the British grew in confidence with respect to the Indian rulers and pursued a policy of military conquest and widespread annexations of territory. Dalhousie, Governor General in the 1840s, felt that since the Princely administrations could never match in quality that of British India as much territory as possible should be annexed from the Princes

¹³ Parliamentary Papers, House of Commons and Command, Volume 14, House of Commons, p156

and brought under company rule. He introduced the 'policy of lapse'. Under this policy the estate of a Prince without a direct heir would become directly administered British territory.

Recent studies have shown that the British disproportionately annexed the more fertile regions of India¹⁴. In a period when the economy was overwhelmingly agricultural, this also meant that the annexed regions were generally richer. As a result, British India was generally richer than the States¹⁵.

In 1857 the mutiny-revolt transformed many aspects of British policy in India including the policy towards the Princely States. In the British post-mortem of 1857, the governor-general, Earl Canning, identified the policy of annexing States, especially the 1856 annexation of Oudh, as having been one of its prime causes. He concluded that the annexations had turned allies into enemies and had weakened the British position in India. In addition, he identified certain States as having been critical in defeating the revolt, notably Gwalior and Hyderabad. At this time Dalhousie's 'policy of lapse', where a Princely territory without a natural heir at the time of the death of the ruling monarch was annexed, was brought to an end. The policy of annexing princely territories was abandoned and the official attitude to the States softened. The administration of India was transferred from the East India Company to the Crown and the East India Company's court of directors was abolished and, instead, Indian affairs in England were overseen by a Secretary of State for India who sat in the UK Cabinet. Queen Victoria delivered a famous proclamation in

¹⁴ Iyer, 'Direct Versus Indirect Colonial Rule in India: Long-Term Consequences', *Review of Economics and Statistics*, Vol. 92, No.4, 2010, pp.693-713

¹⁵ Iyer, 'Direct Versus Indirect Colonial Rule in India: Long-Term Consequences', *Review of Economics and Statistics*, Vol. 92, No.4, 2010, pp.693-713

1858 on the changes in the administration of India which included reassurances to the Princes that the policy of annexation had come to an end:

We hereby announce to the native Princes of India that all treaties and engagements made with them by or under authority of the Honourable East India Company are by us accepted, and will be scrupulously maintained, and we look for the like observance on their part. We desire no extension of our present territorial possessions; and while we will permit no aggression upon our dominions or our rights to be attempted with impunity, we shall sanction to no encroachment on those of others. We shall respect the rights, dignity and honour of native Princes as our own; and we desire that they, as well as our own subjects, should enjoy that prosperity and that social advancement which can only be secured by internal peace and good government¹⁶

This Proclamation committed the new Government of India to upholding the set of treaties in place between the Company and the States. This series of events altered the course of British policy towards Travancore in the mid nineteenth century. At the time of the 1857 mutiny-revolt Travancore was under threat of annexation on the grounds that it was 'misruled', and the Christian missionaries residing in the State encouraged annexation by the British. However, the abandonment of the annexation policy from 1858 meant that Travancore narrowly avoided being annexed. It has been argued that the threat of annexation spurred the Travancore government into a programme of administrative and governmental reform from the 1860s.

... from the 1860s, powerful forces came increasingly to bear on the lives of Travancoreans. Travancore had fallen into grave disfavour with British government in the 1850s for its careless, corrupt and cruel administration. In 1860 a young and well-educated Maharaja came to the throne. ...British pressure to reform the administration complemented the enthusiasm of the young Maharaja and his minister to be seen as innovators and modernisers.¹⁷

Menon, a scholar of this period in Travancore's history, describes it in the following terms: "In the period before the mutiny there was a real threat of

¹⁶ Queen Victoria's Proclamation, 1 November 1858, in Harlow and Carter, (eds.) *Imperialism and Orientalism: A Documentary Sourcebook*, Malden, MA, Blackwell, 1999

¹⁷ Jeffrey, R., 'Travancore: Status, Class and the Growth of Radical Politics, 1860-1940' in Jeffrey (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p140

annexation, and to avoid allegations of mis-rule it was necessary [for Travancore] to beat the British at their own game.”¹⁸. Just a decade later, in the 1870s, Travancore’s reputation with the British had transformed. It had gone from a target of vocal criticism to being described as ‘model state’ in just a few decades¹⁹.

In this period, in the wake of the 1857 mutiny-revolt, different advantages of the system of indirect rule from those expressed by Elphinstone earlier in the century, came to the fore for the British. In the 1860s the British Indian budget was suffering as a result of the huge military costs of 1857. The British administration was dealing with the debts associated with the conflict and was struggling to administer the territories it already controlled. Lord Canning, Governor General of India (1856-62) saw indirect rule as a way of extending British influence in India at a lower cost than direct administration and without sacrificing the quality of governance:

Every real advantage to the people which can be expected from our rule can be secured through a Native ruler, with the aid of an English Political Agent of average ability, more surely, easily, and cheaply than by any form of direct administration with which I am acquainted.²⁰

Several cultural trends in Britain had an important impact on policy in India from the third quarter of the nineteenth century. The post-rebellion softening of the British towards the States solidified into an official view of indirect India as traditional, aristocratic and loyal. The Tory governments of the 1870s envisioned the Princes as the rightful rulers of India with ancient

¹⁸ Menon, ‘Popular Princes: Kingship and Social Change in Travancore and Cochin 1870-1930’, *Modern History DPhil* University of Oxford, 1998, p25

¹⁹ Kawashima, K., *Missionaries and a Hindu State: Travancore 1856-1936*, Oxford University Press, New Delhi, 1998, p37

²⁰ cited in Fisher, *Indirect Rule in India: Residents and the Residency System 1764-1858*, Delhi, Oxford University Press, 1991, p432

pedigree. In Parliament in 1876, Disraeli emphasised the status of the Princes saying that many “occupy thrones which were filled by their ancestors when England was a Roman Province.”²¹ However, also in this period there was a growing distaste among the British for Indian culture. This was partly an expression of the psychological trauma caused by the mutiny-revolt to British confidence and security in India. It was also a reflection of the development of ‘scientific racism’ in this period, which ranked the non-white races far below Europeans²².

The internal administration of States was also occasionally an area in which the British would interfere in the 1870s. In this period the strength of utilitarian and evangelical forces in the British administration had strengthened especially among the higher echelons of the administration such as the viceroy Lord Mayo. It was increasingly felt that the British were responsible for preventing ‘misrule’ in the States. The States had significant freedom in internal policymaking but Britain maintained its position as the ‘Paramount Power’. The definition of paramountcy was vague and, it seems, the British preferred it so. In the 1920s when the power of the States relative to the ‘paramount power’ was tested by Hyderabad, in an episode described below, the British refused to be drawn into a more precise definition of the nature of the British authority over the States while continuing to assert that it was, nevertheless, overarching.

²¹ Cited in Metcalf, T., *Ideologies of the Raj (New Cambridge History of India)*, Cambridge, Cambridge University Press, 1997, p61

²² A British official was quoted in 1861 as saying “the sympathy which Englishmen, whether long resident or fresh to India, felt for the natives has changed to a general feeling of repugnance if not of antipathy”, quoted Brown, J., *Modern India: The Origins of an Asian Democracy*, Oxford, Oxford University Press, 1994, p135. See also Metcalf, T., *Ideologies of the Raj (New Cambridge History of India)*, Cambridge, Cambridge University Press, 1997

The first decade of the twentieth century was the apex of the last phase of intervention by the British in the internal administration of the States under the viceroyalty of Curzon (1899-1905). There was a resurgence of annexations and aggressive expansion of British influence along the border of India. Curzon was notoriously concerned about the threat to India posed by Russia, which led him to expand British influence in the areas between India and Russia²³. This period prompted vehement complaints by the Princes at the highhandedness of the British attitude towards them.

The Princes' bargaining power with the British increased in the early twentieth century. With the increasing power of Congress in the first decade of the twentieth century, the British found themselves in need of local allies. This underlay the next change in British policy to the States, a policy of *laissez faire*, which was implemented gradually from 1909.

The Political Service: The Administration of British Indian-States Relations

Under the East India Company, the role of the British representative of the Company in a State, known as the 'Resident' was to transmit messages between the Indian Prince and the British. The remit of this diplomatic role was wider in the eighteenth and early nineteenth centuries when the French threat was still alive and Residents enjoyed a wide degree of autonomy. Appointments to the position of Resident were ad hoc; those selected did not have any special qualifications for the post and did not have a consistent role from State to State.

²³ Curzon devoted a chapter of his book *Russia in Central Asia*, to the threat posed by Russia to British India.

As the role of resident became standardized in the course of the nineteenth century there developed a set of tasks that the residents were expected to accomplish. One was intelligence gathering. The second was that the resident was to have a monopoly over official communication into and out of the State. Third, the resident was to negotiate financial settlements with the Indian rulers for the Company's protection of the States.

In the period of Crown rule in India, from 1858, the apparatus for maintaining relations between the British and the States was the 'Political Department' which managed the network of residents across the States. By the early twentieth century this service administered all areas of British indirect rule in India as well as British agencies in the Middle East, Afghanistan and temporary positions in places as distant as China and Tibet²⁴. It was a separate branch of the ICS from those who worked in directly ruled India and its officers were composed of both civil servants and military men. This department oversaw residents for the large Indian principalities while smaller States were often grouped together and overseen by one 'agent'.

Fiscal Policy in India in the Late Nineteenth Century

In the early days of the East India Company profits from trade, notably the export of Indian textiles to Europe, made up the bulk of its revenues. By the early nineteenth century the fiscal underpinning of the Company had shifted towards

²⁴ Coen, *The Indian Political Service*, London, Chatto and Windus, 1971, p32

land revenues. In the mid nineteenth century, land revenues were still the foundation of the fiscal system contributing around 50% of public funds²⁵.

It is important to clarify the types of land revenue and property rights in place in colonial India. Within directly ruled British India there were two systems of property rights: the *ryotwari* and *zamindari* systems. The *zamindari*, or permanent settlement system was introduced into Bengal in 1793. Under this system, the right to collect land revenue was given over to a *zamindar* in return for a fixed annual payment to the Company. This system was largely conceived by Cornwallis and its aim was not only to yield a predictable revenue for the central authorities but also to establish in India a British style land owning, 'gentlemanly' class. In the early nineteenth century the *zamindari* system of land tenure fell out of favour among East India Company officials when reports reached England that the *zamindars* were raising rents to an inordinate degree. Concerns were raised that *ryots* should be protected from exploitation of *zamindars* enabled by the *zamindari* system. The result was that the *zamindari* system was not extended beyond its existing terrain in North India and the Northern Circars. Instead a new system of land tenure, *ryotwari*, was introduced in Madras in 1814. Under this system, the land revenue was collected directly from cultivators rather than through intermediary landlords.

Recent research has shown that, within directly ruled India, the *ryotwari* system is associated with improved development outcomes today²⁶. Banerjee and Iyer argue that the reason for this is a persistent effect of poor quality

²⁵ Roy, T., *The Economic History of India 1857-1947*, Delhi, Oxford University Press, 2000, p317

²⁶ Banerjee and Iyer, 'History, Institutions, and Economic Performance: The Legacy of Colonial Land Tenure Systems in India', *American Economic Review*, Vol.95, No.4, 2005, pp.1190-1213

colonial institutions on political empowerment. Other research has explored the variation in tax levels between the two systems of administration. Chaudhary finds that the *ryotwari* regions had higher tax levels and also higher social spending²⁷.

A common way for Indian princes to secure the allegiance of powerful social groups within their own States was to award the rights to collect and retain land revenue to nobles and allies who were known as *jagirdars*²⁸. This permanently reduced the tax base for the State's administration. It was common for powerful military groups, religious institutions and nobles to have some rights to charge land tax in Princely States. In Hyderabad half of the land did not pay land taxes to the centre but rather to such *jagirdars*²⁹. Travancore was not an exception in this. In Travancore religious institutions and the extended family of the Maharaja were excluded from the obligation to pay land revenue to the central administration.

In Travancore, land tenure had undergone a major reform in 1865. Before the reform, the Government had owned most of the land in the State. The reform transferred ownership to the cultivators under what was referred to as 'pandaravaka' land tenure. This Pandaravaka tenure made up most of the cultivated land in the State, 75% in 1911, and it was the only type of land tenure on which full land taxes were paid. On the remainder of the cultivated lands there were various land tax concessions to religious, aristocratic and royal lands.

²⁷ Chaudhary, 'Taxation and Educational Development: Evidence from British India', *Explorations in Economic History*, Vol.47, 2010, pp279-293

²⁸ This had been a common practice in the Mughal era when state allies were given the right to collect land revenue on portions of territory.

²⁹ Ramusack, B., *The Indian Princes and Their States*, 1st ed. Cambridge: Cambridge University Press, 2003, p170-1

As a result, Travancore had a higher proportion of owner-cultivators than other directly and indirectly ruled south Indian regions³⁰.

In nineteenth century Mysore, it was common for the government to give out land tax collection rights, known locally as *inaams*, to influential citizens. This allowed the *inaam* to collect all or part of the land tax as private rather than public income. Roughly 15 to 20% of the Mysorean land revenue was given away as *inaams* in the early nineteenth century. Under the British administration of Mysore in the mid-nineteenth century, the practice of giving out new *inaams* was discontinued, however, the existing *inaams* were allowed to remain³¹.

There was also a tradition of tax farming in Hyderabad in which *talukdars* were given the responsibility of collecting taxes in a particular geographical area from which they would pay a fixed sum to the central government³². There is evidence that a small proportion of the taxes collected under this system actually reached the central treasury, having leaked at many stages to a hierarchy of intermediaries and tax farmers³³. It was under this system that the land tax, the main source of revenue, was collected. There were also a host of other taxes on items as diverse as weddings, untouchability and on the sale of various manufactures including such obscure articles as 'animal dolls made of mud'³⁴.

³⁰ Varghese, *Agrarian Change and Economic Consequences: Land Tenures in Kerala 1850-1960*, Allied Publishers, Calcutta, 1970, p85, p126-130

³¹ Ikegame, *Royalty in Colonial and Post-Colonial India: A Historical Anthropology of Mysore from 1799 to the Present*, Ph.D, University of Edinburgh, 2007, p23, p195-8

³² *A Review of Hyderabad Finance*, Government Press Hyderabad, 1951, p18

³³ This system bears resemblance to the Mughal fiscal system. Hyderabad had been a Mughal principality but had gained significant autonomy from the Mughal State in 1740.

³⁴ *A Review of Hyderabad Finance*, Government Press Hyderabad, 1951, p19

In the 1850s Hyderabad State was in financial distress and was threatened with annexation by the British. In 1853 Sir Salar Jung I became the Dewan of Hyderabad and initiated fundamental financial reform in the State to fight off these threats³⁵. At the time he came to office Hyderabad was in debt and its annual revenues were unable to meet its expenditures³⁶. The reforms initiated included ending tax farming, and undertaking a revenue survey. The amount of revenue collected increased and the State's finances improved. A Secretary of Revenue reporting to the Dewan was appointed from 1864 and a consistent system of accounting was introduced in 1878. Salar Jung served as Dewan until 1883.

Salar Jung was part of an early generation of reforming officials who served in several different States. Another example is Sir T Madhava Rao who was Dewan of Travancore from 1857-72. He had overseen some important administrative reforms and came to do the same when he served in the same position in Baroda in the 1870s and 1880s. In the States Dewans were appointed by the Royal family and often came from other regions of India. This was a strategy to ensure their loyalty to the monarch alone³⁷.

Fragmentary public accounts data for the States is available for some years in the late nineteenth century. Despite the concessions and tax farming

³⁵ A *Dewan* was essentially a Prime Minister of a State who was appointed by and served under the Prince.

³⁶ He made use of many British trained, Urdu speaking, technical advisors to help with his reforms. This initiated a tension in the state over the distribution of government positions between locals and foreigners, which lasted for the next one hundred years. For more on this issue see Leonard, "Hyderabad: The Mulki-Non-Mulki Conflict" in Jeffrey (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p69.

³⁷ Kawashima, K., *Missionaries and a Hindu State: Travancore 1856-1936*, Oxford University Press, New Delhi, 1998, p45

which reduced the land tax base in all three large States, land revenue still provided much of their tax revenues as it did in British India in this period. Land taxes were most important in Mysore where they comprised around 65% of state revenues in the 1880s. Next was Hyderabad where 59% of revenues came from land taxes in 1877, while this tax was least important in Travancore where it formed only 27% in 1878³⁸. The reason that land taxes are less important in Travancore is that the state was already raising significant revenues from excise and customs, in this early period, partly from the traditional export tax on valuable agricultural products such as pepper and other spices.

Political Economy

From the 1850s classical liberal political economy was the intellectual orthodoxy among British policy makers at home as well as in India. From the abolition of the Corn Laws in 1846 the pursuit of free trade and a heavily circumscribed role of the state formed the dominant worldview among the British elite. One example of this approach to the administration of India is the following statement by Fitzjames Stephen, Law Member 1869-1872, who was described as the “political philosopher” of the Indian Civil Service at the end of the nineteenth century³⁹. He viewed the British role in India as introducing selected elements of European civilization, primarily law and order⁴⁰. But the elements were carefully selected and rather narrow. He wrote:

³⁸ Author’s calculations

³⁹ Stokes, *The English Utilitarians and India*, Oxford University Press, Oxford, 1959, p305

⁴⁰ Stephen was a champion of an aggressive strand of liberalism inspired by Betham and Hobbes. He saw conquest as evidence of superiority and justification of British authoritarianism in India. He was a critic of J.S. Mill who embodied a ‘softer’ form of liberalism which emphasized the civilizing aspects of imperialism to be pursued through educating subject nations into their

the essential parts of European civilization are peace, order, the supremacy of law, prevention of crime, the redress of wrong, the enforcement of contracts, the development and concentration of the military force of the state, the construction of public works, the collection and expenditure of revenue required for these objects in such a way as to promote, to the utmost the public interest, interfering as little as possible with the comfort or wealth of the inhabitants and improvement of the people.⁴¹

In India the liberal advocacy of a small state was strengthened by concerns that high taxation may lead to another uprising of the 1857 type. The desire for low taxation clashed with the simultaneous desire for a large army to secure Britain's status in India and beyond. In the late nineteenth century, the official attitude was to reduce all public expenditure in India including military expenditure. For instance, Lord Salisbury, Secretary of State for India, wrote this to Lord Northbrook, Viceroy of India, in February 1870:

... a small army and small taxes is a safer position than the opposite alternative. Even in England where we are sure of the loyalty of our population I am sceptical of the policy of large preparations.⁴²

In 1885 Britain spent 21% of total public expenditure on defence and it remained at this level into the first decade of the twentieth century⁴³. In British India, defence expenditure was a higher proportion of public expenditure than in Britain itself. Defence already formed 25% of the budget in the late 1870s and it increased by the first years of the twentieth century, reaching 30% in 1906⁴⁴. The increase in defence expenditure in British India at the turn of the nineteenth and twentieth centuries was prompted by security concerns on the North West Frontier. The 1907 Anglo-Russian Convention delimited each empire's sphere of influence with Afghanistan falling within the British sphere and Persia shared

eventual liberty. For more on this see Mehta, *Liberalism and Empire: A Study in the Nineteenth-Century British Liberal Thought*, London, University of Chicago Press, 1992

⁴¹ Stephen, *The Nineteenth Century*, Vol. XIV, No. LXXX, p554

⁴² Ed Brumpton, *A Selection from the India Office Correspondence of Robert Cecil, Third Marquis of Salisbury, 1866-1867 and 1874-1878*, Edwin Mellen Press, New York, 2002, p122

⁴³ Mitchell, *British Historical Statistics*, Cambridge University Press, 2011

⁴⁴ Author's calculations

between the two Imperial powers. Despite the expressions of friendship contained in the 1907 Anglo-Russian convention there remained Russophobes, such as Lord Kitchener, in both the Indian and British administrations who worried about the threat posed to Britain's Indian empire by Russia's imperial expansion across Central Asia and pressed for a larger military presence in British India despite the cost.

Despite the spread of classical political economy within the British administration in India, there were consistent deficits in the Indian accounts from the mid nineteenth century until the end of the century. This was primarily due to sudden, large military expenditure, which frequently 'knocked on the head' and 'smashed' India's budgets⁴⁵. These military adventures occurred in the context of the 'Great Game' for influence in Central Asia and along the Indian frontier between Britain and Russia. In the 28 years between 1881 and 1909 British India had budget deficits in 9 years⁴⁶. The British Indian deficits corresponded to years of high military expenditure for instance 1880-81, the time of the Second Afghan War, and 1898 – all years of unusually high military expenditure and large deficits.

There was reluctance in British India to introduce new types of taxes in the nineteenth century. The income tax was introduced in British India in 1860 but remained in place only until 1865 because it was deemed too controversial, since it was highly unpopular amongst the wealthier and educated elites of India as well as British civil servants. Its introduction was partly driven by the need to

⁴⁵ Lord Randolph Churchill, Secretary of State for India, HC Deb 6 August 1885, vol 300, cols 1289-1290

⁴⁶ Author's calculations

rehabilitate British Indian finances in the wake of the mutiny-revolt. An altered version of the income tax was reintroduced in 1867-8 in the form of a license tax on traders. This tax was less controversial among the powerful and privileged classes since it mainly affected petty Indian traders rather than landed elites or professional Europeans⁴⁷. There was also reluctance to raise public revenue from customs taxes in this period, though for slightly different reasons. The Indian customs system was reformed in 1860. Before that time, there was an asymmetric tariffs policy where British goods had privileged access to Indian markets, but the same was not true of Indian goods in British markets. Under the new 1860 system, British manufacturers lost some of their privileged position in Indian markets by the introduction of a flat import duty. This policy was also motivated by the search for new sources of revenue after the heavy public expenditure of 1857. Finally, a broader income tax was reintroduced in India in 1886.

Customs were a particularly unpopular form of taxation in Britain and India in the late nineteenth century because they were viewed as tools of protectionism. In the late nineteenth century, Britain was the international champion of free trade⁴⁸. Despite some vocal domestic demands in India for protection of local industries, there were almost no customs duties in India in this period. Lord Northbrook, Viceroy of India, explains this position on customs in a speech in 1875:

⁴⁷ Ambirajan, *Classical Political Economy and British Policy in India*, Cambridge University Press, Cambridge, 1978, p211

⁴⁸ For a counter-argument to this see Nye, J. *War, Wine and Taxes: The Political Economy of Anglo-French Trade, 1689-1900*, (Princeton: Princeton University Press, 2007)

Indian statesmen have never regarded Customs duties as desirable for the purpose of protecting the products or manufactures of India. In India, equally as in England, Protection has been regarded as an exploded doctrine, contrary to the general interest of the country which imposes protection duties.⁴⁹

Despite the official distaste for customs taxes in this period, the British Indian government was not able to remove export customs duties because it could not do without the revenue they provided⁵⁰.

Another important strut of the nineteenth century fiscal system in India was revenue from opium. In the early nineteenth century opium provided around 15% of the East India Company's revenues⁵¹. Opium was a controversial source of public finance both in Britain and in India. In the 1840s and 1850s the revenue system in India was under stress from high military expenditure. In addition, revenue from opium, historically the second most important source of revenue after the land tax, was declining due to the reduced consumption of Indian opium in China. By the 1880s the Indian opium trade was becoming increasingly controversial in Britain. In 1906 a motion was put before the House of Commons describing the trade in opium between India and China as "morally indefensible"⁵². In the 1920s India adopted the policy of gradually eliminating opium exports except for medical uses.

At the beginning of the twentieth century, financial policy in Hyderabad underwent a change resulting from reforms introduced by a British financial advisor, Mr. G. Casson Walker, who was employed in the State in 1901. The most

⁴⁹ Ed Brumpton, *A Selection from the India Office Correspondence of Robert Cecil, Third Marquis of Salisbury, 1866-1867 and 1874-1878*, Edwin Mellen Press, New York, 2002, p475-6

⁵⁰ Ambirajan, *Classical Political Economy and British Policy in India*, Cambridge University Press, Cambridge, 1978, p205

⁵¹ Bose and Jalal, *Modern South Asia: History, Culture, Political Economy*, Oxford University Press, Delhi, 1999, p71

⁵² HC Deb 30 May 1906, vol 158, col 494

important change was the prioritization of budget surpluses, which continued in the State throughout the remainder of the colonial period. He became Assistant minister of finance and worked in the State for three years. "Sir George Casson Walker not only rehabilitated the finances of the State on a sound and stable basis but also ushered in an age of surplus budgets which became one of the characteristic features of the State's financial system"⁵³. Data from Hyderabad for the first decade of the twentieth century show that between 1900 and 1909 Hyderabad had a budget deficit in only one year.

While Hyderabad committed itself to the pursuit of budget surpluses and was successful in implementing this policy in the early twentieth century, there were early signs in Travancore that the South Indian State was adopting its own approach that differed both from Hyderabad's budget surpluses and the British model. The State's 1883-4 administration report is openly critical of the practice of 'hoarding' public money. Instead, the report argues, the State should invest in its citizens':

It seems to be thought that the best use one can make of money is to hoard it, and the [Travancore] administration has been accordingly assailed for spending what preceding administrations had hoarded. Of course, in a Native State like Travancore it is of the utmost importance that there should be a good reserve to fall back upon in emergencies, but any surplus beyond that is best expended in the country for the benefit of the people.⁵⁴

The types of taxes imposed in British India and the States were of similar types in this period. In all of the regions the land revenue and indirect taxes formed the backbone of the fiscal system. Travancore was unusual in raising a much lower proportion of revenues from the land tax and a higher proportion

⁵³ *A Review of Hyderabad Finance*, Government Press Hyderabad, 1951, p33

⁵⁴ IOR/V/10/2062, Travancore Administration Report, 1878 to 1886

from customs than the other large States. By the beginning of the twentieth century, however, there were indications that the large States were developing distinctive approaches to fiscal policy making.

With the dawning of the new century, fiscal policy underwent changes across India. New sources of revenue were explored beyond the traditional nineteenth century sources such as the land tax and the salt tax. In addition the types of activities engaged in by Indian governments expanded in some regions but not in others. The changes in tax raising and public expenditure at the beginning of the twentieth century are explored in the following two chapters.

Chapter 2. Managing the Imperial System of Indirect Rule: 1909-1937. Raising Revenue

The sources of tax revenue of the large States and British India, which had been similar in many respects in the nineteenth century, began to diverge in the early years of the twentieth century. This was predominantly because revenues from excise increase and because India's increasing tariff barriers, led to greater customs revenues. The distribution of these customs revenues within India was a controversial issue between the States and the Paramount Power since most of the revenues were collected at British Indian ports and were kept by the British authorities. However, the agitations by the Princes for a better deal and for a more standardised fiscal system in India yielded practically no results, exposing the predominantly rigid nature of fiscal relations between British India and the States.

One area in which Princely public expenditure flowed to British India was through their 'tribute' contributions to India-wide defence costs. Their financial commitments to British India were laid out in the nineteenth century treaties drawn up under the East India Company's rule. The tribute system was almost completely resistant to change despite the recognition by both the States and the British of its inherent and serious flaws. Disputes over the operation of the tribute system flared up between some of the large States and the British in the early twentieth century. While these disputes occurred on the diplomatic stage, behind the scenes, the system's inherent vulnerability to inflation had important effects on both the States' and British India's public finance.

An era of change: 1909-1937

The changes in fiscal policy in this period occurred in a shifting political landscape. The rise of Indian nationalism in British India left the colonists in need of the type of local alliances that the Princes could provide. Such pragmatic considerations were behind the British shift in policy towards the States in 1909. Curzon's (Viceroy of India 1899-1905) programme of interventionism in the States was abandoned for a more hands off approach under Minto (Viceroy 1905-1910). In 1909 in a speech at Udaipur, Earl Minto, announced the policy of non-interference in States' internal affairs. The British hoped that a more hands-off policy towards the States would improve administration in indirectly ruled India by encouraging the Princes' sense of patrician responsibility for their subjects. The non-interventionist phase, which began during Minto's Viceroyalty, which is also referred to in the literature as the *laissez-faire* period, lasted up to the end of colonial rule in India.

After its first meeting in 1885 the Indian National Congress gained strength and momentum in British India from the 1890s. Beginning in the large presidency cities of Calcutta, Bombay and Madras, the nationalist movement had spread across many parts of British India by the early twentieth century. Its agitations were focused on political reforms in directly ruled India and on some national level economic issues such as campaigning for industrial protection for Indian cotton manufactures. However, Congress played little role in politics in the States before the late 1930s.

During World War One the Princes' status as stable and loyal allies to the British was reinforced when the princes provided about a dozen regiments of troops as well as significant financial contributions to the war effort. The Princes' territories came to be seen as regions of stability as the independence movement in British India gained strength. A 1929 official report on conditions in the States lauded their "splendid devotion to the Crown" and in a patronizing phrase, added "To their King-Emperor they look with the devotion of a younger world"¹.

The early twentieth century was a period of significant constitutional change in British India and the gradual development of more democratic institutions. Much of this process was motivated by the British desire to concede just enough to Congress while at the same time minimizing the loss of power to democratic institutions. A significant step in these constitutional reforms in the early twentieth century was the 1919 Government of India Act, which introduced 'dyarchy' as well as expanding the franchise to about 10% of the male population². Under 'dyarchy' the provincial governments became responsible for the administration of some areas of policy including health and education while 'reserved' areas, such as defence and foreign affairs, remained under the control of the central government. To finance these activities, the provinces were allocated all receipts from the land tax, irrigation, excise and stamp duties. The centre's resources came from income tax, opium and salt taxes and from a fixed annual payment from the provinces³. From 1930 the British hoped for a new set

¹ Report of the Indian States Committee 1928-1929, London, HMSO, 1929, p12

² Brown, J., *Modern India: The Origins of an Asian Democracy*, Oxford, Oxford University Press, 1994, p205

³ Tomlinson, *Political Economy of the Raj 1917-1947*, Palgrave, 1979, p112

of constitutional changes in India leading to a 'federal' entity comprising both directly and indirectly ruled regions. Proposals for a federal government included an all India Legislature comprising representatives from both British India and the States. One of the advantages of such a scheme from the British point of view was the hope that the Princes' representatives would moderate more radical Congress policies. Concerns of the Princes over potential new threats to their, already limited, autonomy in indirect taxes undermined their enthusiasm for the federal scheme. Largely because of the reluctance of the Princes to support the proposals, the federalist scheme ultimately foundered. Ultimately, there was no reform of the States' fundamental constitutional relationship with British India for the remainder of the colonial period.

By contrast there was little substantive constitutional change or democratization in the States in the late colonial period. However, there were changes in way the Princes interacted with the British authorities and also with each other. The Princes' treaties with the British had prohibited them from interacting with each other to any great extent until the formation of the Chamber of Princes in 1918, which became operational from 1921. The body was advisory with little practical power. Many of the large States, including Mysore, Travancore and Hyderabad, remained aloof from the Chamber and instead pursued bilateral relationships with the British⁴. One historian of the Chamber has described it as a "body which soon lost most of the major States and wallowed in questions of

⁴ Another administrative change in this period affecting Travancore and the other southernmost states occurred in 1923 when they were moved from being overlooked by political officers of the Madras Government to the Government of India.

status when it should have been concerned with survival.”⁵ Since this study focuses on the large States, the Chamber’s activities are of less concern than bilateral relations between the British and the large States.

While the colonial institutions struggled to accommodate to the growing nationalist movement in India and, with respect to the states, adopted a conciliatory policy of *laissez faire*, major economic changes were taking place that were to have an important impact on public finances across India. From the early twentieth century the traditional British policy of free trade was under assault from the many countries across the world that were raising tariff barriers. In India too, there were local demands for protection for domestic industry. India broke with its traditional free trade policy by raising tariffs in the 1910s, 1920s and 1930s. This did not happen without protests from interested parties. Manufacturers in Britain fought to keep Indian markets open but they were ultimately unsuccessful in their efforts and Indian customs barriers rose. As a result, customs became a much more important source of government revenue in India, a significant change we return to below.

The early twentieth century was a turbulent period for the Indian economy. During the First World War constrained public resources and significant defence expenditure led to inflationary finance in India. The government expanded the money supply to finance much of the new expenditure. The amount of currency in circulation in India rose from Rs 600 million in 1914 to Rs 1530 million in 1919. For many primary exporters across the world the

⁵ Jeffrey, R., ‘Introduction’, in Jeffrey (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p11

post World War One period was a time of recovery and even boom conditions. However, this boom “virtually bypassed India”⁶. This was partly because of a stringent deflationary monetary policy introduced to maintain a strong rupee. The strong Indian currency impacted on exporters and during the Depression India lost its export surplus with the rest of the globe. In 1931 the pound came off the gold standard but the exchange rate between the rupee and pound remained fixed. The rupee exchange rate was high relative to the pound, rendering Indian exports expensive and provoking an outflow of gold, sometimes referred to as ‘distress gold’ from India in the 1930s. The high value of the rupee to the pound also guaranteed India’s ability to pay the ‘home charges’, which comprised the pensions and administrative expenditure of India that flowed to Britain⁷.

In the 1930s India experienced only a slow recovery from the Great Depression before the Second World War. The inter war period was a time of stagnant real wages and biological living standards in India⁸. At the same time, population growth accelerated in this period (Table 2.1 below). Between 1901 and 1941 the population of British India increased by 32%. In Travancore there was a population explosion, the number of Travancoreans increased by 106% in

⁶ D.H. Aldcroft, *From Versailles to Wall Street, 1919-1929*, London, 1977, p216, cited in Balachandran, ‘Finance and Politics in Late Colonial India: 1917-1947’, *Journal of South Asian Studies*, Vol. 19, No.1, 1996, p95

⁷ Tomlinson, *Political Economy of the Raj 1917-1947*, Palgrave, 1979, p90

⁸ See Strachey, A. ‘Caste, Public Policy and Health: Living Standards in South India 1910-1945’, Unpublished MPhil thesis, University of Oxford, 2011 and Guntupalli, A. and Baten, J., ‘The Development and Inequality of Heights in North, West, and East India 1915-1944’, *Explorations in Economic History*, Vol. 43 (No. 4, 2006), 578-608.

the same 40-year period⁹. The population increase was another economic challenge as the increase in the number of young people presented an added demographic burden for the working population.

Table 2.1: Population of the Large States

	Hyderabad	Travancore	Mysore
1911	13,374,676	3,428,975	5,806,193
1921	12,471,770	4,006,062	5,978,892
1931	14,436,148	5,095,973	6,557,302
1941	16,338,534	6,070,018	7,329,140

Source: Census of India, Various years and volumes

In the early twentieth century India was still a primarily agricultural economy. Nevertheless, as industry developed, the proportion of manufactures in total exports increased from 5% in 1850 to 28% in 1935¹⁰. The large States were also developing large industries in the period. In terms of large industries, by the 1930s Travancore had factories producing rubber, tea, refined oil and coir products¹¹. As the composition of India's trade diversified so did her trading partners. In the mid nineteenth century India relied largely on Britain and China as markets for her exports but by the early 1940s countries including Japan and

⁹ By 1931 the population density in British India was 432 per square mile, which was much higher than in agricultural European countries. In Travancore the population density in 1931 was 668 people per square mile, higher than any British Indian province, Travancore Census Report, 1931, p2

¹⁰ Roy, T., *The Economic History of India 1857-1947*, Delhi, Oxford University Press, 2000, p96

¹¹ Statistics of Travancore, 1937-38, Trivandrum University Library.

the USA were also important trading partners for India. Tomlinson summarizes the development of the Indian economy in this period:

By the eve of the Second World War the Indian economy was a great deal less 'colonial' than it had been twenty years before, using the classic definition of a colonial economy as one which has no manufacturing industry of its own but which exchanges national primary produce against foreign manufactures through international trade¹².

The disruption to international trade combined with the shift towards protectionist customs policies had significant implications for the Indian tax base.

Fiscal policy: 1909-1937

This section will address some of the most important changes in tax revenues in direct and indirectly ruled India from the beginning of the *laissez faire* period in British-States relations in 1909 up to 1937. Indirect taxes were one of the prime areas of change and controversy. Under financial pressure because of budget deficits resulting from the huge cost of World War One, the British Indian authorities moved to raise customs tariffs to generate more revenue. As a result, customs revenues became a much more important source of tax revenues for British India in this period compared to traditional taxes such as the land tax. Since British India was disproportionately coastal and customs were levied at the point of entry into India, the British Indian authorities also collected customs duties on goods destined for the States. The terms of many of the States' treaties limited their ability to raise their own customs duties at their own borders even when they had seaports. In the 1920s and 1930s the growing

¹² Tomlinson, *Political Economy of the Raj 1917-1947*, Palgrave, 1979, p44

customs revenues flowing to the British Indian treasury provoked complaints from the States that they were being denied a fair share of those revenues.

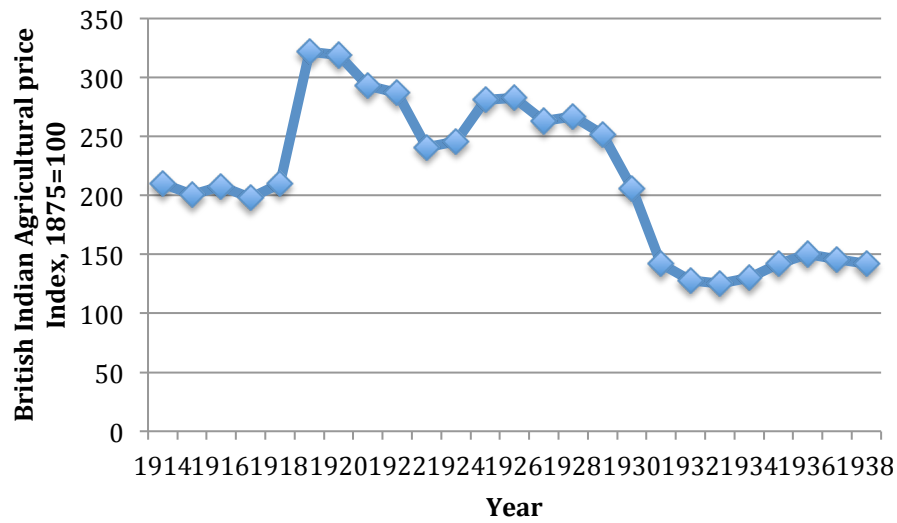
Land Tax in the Twentieth Century

As the twentieth century wore on the real value of some of the most important traditional taxes for British India, such as the land tax, salt and opium, continued to decline. To compensate for this, more public funds were raised from indirect taxes such as a more diverse range of excise taxes and customs. As a result, from being a secondary source of revenue, in this period indirect taxes became the backbone of British Indian public finance.

In 1871 the land tax comprised over 35% of the total revenues in British India. It fell consistently as a percentage of tax revenues from the late nineteenth century onwards. The decline in value of the land tax was most pronounced during the periods of inflation that coincided with the World Wars as land tax charges were fixed in nominal terms for long periods. The inflation during World War One was responsible for the percentage of revenue from the land tax in British India fell from 25% in 1914 to 17% in 1919¹³. Figure 2.1 below shows the sudden increase in agricultural prices between 1918 and 1919.

¹³ Author's calculations

Figure 2.1 British Indian Agricultural Prices

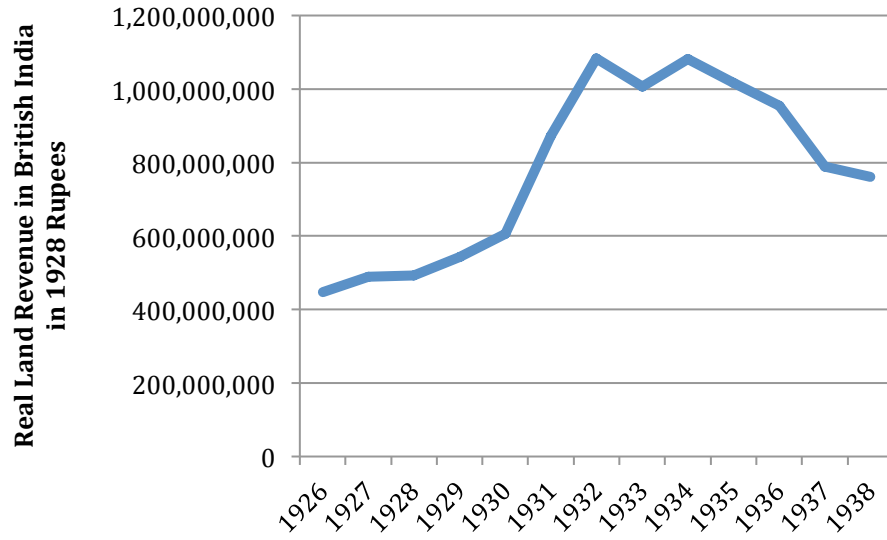


Source: Adapted from the Appendix of McAlpin, M., 'Price Movements and Fluctuations in Economic Activity 1860-1947', in D. Kumar (ed.) *Cambridge Economic History of India* (2vols., Cambridge: Cambridge University Press, 1983).

It is well established that British Indian land taxes were pro-cyclical in character; increasing in real terms during economic downturns and decreasing during more prosperous periods¹⁴. Trends in gross revenue from land tax are summarised in Figure 2.2 for British India, and in Figure 2.3 for Travancore, for 1926-1938.

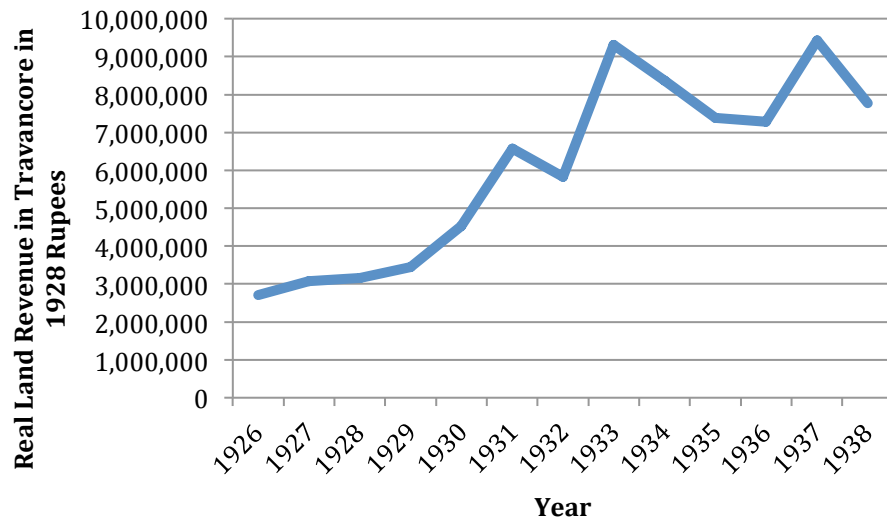
¹⁴ Roy, T., *The Economic History of India 1857-1947*, Delhi, Oxford University Press, 2000, p318

Figure 2.2: British Indian Real Land Revenue



Source: Finance and Revenue Accounts of British India, Various Editions

Figure 2.3: Travancore Real Land Revenue



Source: Statistics of Travancore, Various Editions.

Real land revenue receipts in British India increased significantly in the deflationary period following the Depression. This pattern also holds for land revenue in many of the States. For instance, Figure 2.3 above shows the real land revenue in Travancore increased in a similar way in the 1930s. The incidence of land tax was often nominally fixed for long periods, particularly in regions with the *zamindari* land tax system, which meant it was inflexible to the fall in prices of primary products. The result was an increase in real terms of the burden of land tax for many during the Depression period. Referring to the invariance of indirect taxes such as the land revenue to changes in prices the nationalist economist Ahmed writes, "The comparative inflexibility of the financial system in India enhances considerably the burden of economic decline on the people."¹⁵

Though the real burden of the land tax increased during the depression, this was a deviation from the longer term trend of a decline in this tax both in real terms and as a proportion of public revenues. Figure 2.2 shows that from the mid-1930s the real value of the land tax in British India began again to decline. Raising further revenues from the land tax was difficult in British India as it would have risked alienating the powerful landed aristocracy who were traditional British allies.

The maxim of free trade had been applied to trade between India and Britain for much of the nineteenth century. However, after the First World War the colonial administration faced large budget deficits, partly as a result of interest payments on debts built up during the conflict and this prompted the

¹⁵ IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938, p2

authorities to turn to tariffs as a much needed source of revenue. Before World War One there were close to no tariff barriers between India and Britain. This was a result of the combination of free trade ideology and intensive lobbying by particular British manufacturing groups, notably the Lancashire textiles industry¹⁶. The administration turned to excise and customs, which generated protests among groups in Britain, especially among the Lancashire cotton lobby, who had sought to retain open access to Indian markets.

Excise Taxes

Excise taxes were applied to domestically produced goods, commonly as a percentage of the product's pre-tax sales price. The most common targets for excise taxes were alcohol and cigarettes. The salt tax of colonial India was also a form of an excise tax, although it was recorded separately from the others in the official accounts. In India excise duties were also in place at times on other goods such as matches and cotton manufactures.

The motivation for the excise tax on alcohol was partly moral, to reduce the consumption of goods considered to be damaging to society. The other motivation was to generate public revenue. In Travancore and British India, excise was a controversial area of policy in the interwar period because of increasingly vocal temperance campaigns. Partly motivated by religious considerations, both Gandhi's temperance campaign and the local Travancore campaign sought to reduce Indian governments' reliance on revenues derived

¹⁶ Roy, T., *The Economic History of India 1857-1947*, Delhi, Oxford University Press, 2000, p316

from alcohol sales but this had little practical impact on the composition of tax revenues in either region.

Throughout the early twentieth century there were vocal demands in the Travancore legislature for prohibition. One member referred to the excise revenue as “blood money”, another as “immoral revenue”¹⁷. The Travancore government had stated its aim of gradually achieving prohibition in the State from at least the mid 1920s. However, the State finances could not cope without the excise revenues on spirits, a point noted in the legislative council debates, making prohibition financially impractical¹⁸. In response to the calls for prohibition the government restated its, now more moderate, aims of making it “increasingly difficult for the consumer to obtain strong drink” by introducing measures ranging from “advising people not to drink”, to “increasing the tree tax” and reducing the number of liquor shops¹⁹. The Government justified their abandonment of prohibition on the grounds that “it is a wrong principle of sound government to impose a law when the people are not prepared for it and when they are against it”²⁰. Despite the Government’s decision not to introduce prohibition, the State revenues from taxes on alcohol and other stimulants such as opium continued to attract criticism in the legislative councils of the State.

¹⁷ Mr Kattiyattu Sivarma Panickar, Proceedings of the Travancore Sri Chirta State Council, Vol.1, Superintendent Government Press 1934, Presentation of the Budget for 1933-1934 in July 1933. Government of Travancore, Kerala State Archives., Mr M Sivatanu Pillai, Legislative Council Proceedings 1927, Government of Travancore, Kerala State Archives.

¹⁸ Mr A K Pillai, Legislative Council Proceedings 1927, Government of Travancore, Kerala State Archives.

¹⁹ Mr A J Van Ross (Excise Commissioner) Legislative Council Proceedings 1927, Government of Travancore, Kerala State Archives.

²⁰ Mr A J Van Ross (Excise Commissioner) Legislative Council Proceedings 1927, Government of Travancore, Kerala State Archives.

When Congress ministries came to power in British Indian Provinces after the 1937 elections they tried to enforce prohibition, under Gandhi's orders. Many succeeded in reducing government revenue from excise within their own provinces but the changes were too small to have much overall effect on British Indian excise revenue.

The production of salt was a government monopoly in British India and most States, allowing the government to charge a monopoly price, which covered production costs as well as a premium for revenue purposes. This tax was particularly regressive since it was imposed on an essential item of consumption. The collection of the salt tax in India prompted Congress agitation against the tax in the 1930s. Gandhi explained his campaign against the tax to the Viceroy in the following terms:

the British system seems to be designed to crush the very life out of him [the Indian peasant]. Even the salt he must use to live is so taxed as to make the burden fall heaviest on him [the Indian peasant], if only because of the heartless impartiality of its incidence. The tax shows itself still more burdensome on the poor man when it is remembered that salt is the one thing he must eat more than the rich man both individually and collectively.²¹

The 1930 Congress salt *satyagraha* included Gandhi's famous salt march, a walk of 240 miles to the sea to make illegal salt. By the early twentieth century the salt tax was no longer one of the prime pillars of the British Indian fiscal system, having provided 10% of the budget in the 1870s, by the 1930s this had fallen to 5%. Congress targeted it because of its regressive nature not because of its importance to the British Indian fiscal system. The *satyagraha* attracted national debate and across British India there were local movements of varying size

²¹ MSS EUR C152/24, Letter of 2nd March, 1930 from Mahatma Gandhi to Lord Irwin, British Library

encouraging a boycott of government salt. In the British Indian finance data there is a small dip in the revenue from salt in 1930 but this did not have a significant impact on British Indian finance more widely because salt formed such a small percentage of public revenues. Salt policies in the States were regulated by their treaties with the British. Most States were forced to import taxed salt from British India.

The States' excise regimes on non-salt goods were regulated by a combination of treaty and convention. In excise on non-salt goods the States were expected to charge taxes at a rate no lower than the adjoining British Indian province²². The individual States' responses to this excise framework and to excise policy differed. Hyderabad simply followed British Indian excise tariffs²³. In line with its Moghul heritage and tradition of tax farming, Hyderabad did not use government employees to collect these excise taxes. Rather, in this State the rights to collect excise on behalf of the government were auctioned for contracts of between three and ten years²⁴.

Despite official distaste for some excise taxes such as those on alcohol, excise remained an important source of revenue across British India and the States throughout the late colonial period.

²² Thomas, *The Growth of Federal Finance in India Being a Survey of India's Public Finances from 1833 to 1939*, Madras, Oxford University Press, 1939, p384

²³ *A Review of Hyderabad Finance*, Government Press Hyderabad, 1951, p178

²⁴ Government of India, *Imperial Gazetteer of India: Hyderabad*, New edition, published under the authority of His Majesty's Secretary of State for India in Council. Oxford: Clarendon Press, 1909, p62-3

Customs Taxes

Customs tariffs in India included both import and export tariffs. In the mid nineteenth century there was an ad valorem tariff of 3 percent on most Indian exports²⁵. This export tax was in place for revenue generation rather than protection purposes and it was gradually phased out over the late nineteenth century on the grounds that it was 'economically unsound' and inconsistent with free trade²⁶. In the mid nineteenth century Indian import duties had excluded cotton goods, under pressure from the Lancashire manufacturing lobby. However, in 1894, under desperate fiscal pressures, the government of India increased the scope of the 5% import tariff to include cotton manufactures. The Lancashire cotton lobby objected strenuously to this measure seeking to keep Indian markets open to their products. They secured the concession of having a counterbalancing cotton excise duty within India implemented so that their products would not lose competitiveness relative to local goods in the Indian market. Most imports were subject to the 5% tariff at this time.

By the early twentieth century many in India sought the use of protectionist indirect taxes to encourage the development of domestic industries. Concerns about the threat to Indian industries posed by British imports flared up in 1905. In that year the nationalist Swadeshi movement initiated a boycott of imported cotton cloth and symbolically burned British cotton goods in bonfires.

²⁵ Government Central Press, *Report of the Indian Fiscal Commission 1921-22*, Simla, p12

²⁶ The export tariff was phased out by the early twentieth century for all goods except for rice, where the 3 percent export tariff remained in place.

As a result, the amount of cotton manufactured goods imported into India fell by 25% in 1905-6²⁷.

In the early twentieth century there was a shift towards protectionism in many parts of the world. A number of large economies including Germany, France and Japan introduced protectionist tariff policies. Several colonies had been urging a tariff policy of imperial preference from the beginning of the twentieth century including Canada, Australia and South Africa. Britain resisted suggestions that it should introduce preferential tariff rates for the colonies until the 1917 Imperial War Conference which concluded that trade between Imperial countries should be encouraged using advantageous customs arrangements. During the course of the First World War the Indian import tariff was increased from 5 to 7.5% to provide more public funds for defence. In 1919 the British recognized that India should be allowed to make its own decisions over customs in the Fiscal Autonomy Convention. By this point, customs were established as an integral source of public funds in British India.

Coalescing somewhat with Indian demands for protectionism, the 1921 Fiscal Commission recommended a policy of protection in India in order to promote domestic industries²⁸. This presented an important evolution of public policy away from the nineteenth century attachment to free trade by the Indian administration. The Commission distinguished between those tariffs which were motivated by protection and those motivated by revenue generation. Revenue-

²⁷ Bose and Jalal, *Modern South Asia: History, Culture, Political Economy*, Routledge, London, 1998, p120

²⁸ Government Central Press, *Report of the Indian Fiscal Commission 1921-22*, Simla, p52

raising tariffs were those imposed on goods that were not produced domestically and therefore would not have a protective effect on domestic industry. These could be detrimental: tariffs on the import of raw materials could undermine development by increasing production costs and hindering investment. The concrete recommendations of the Commission were for a general 15% ad valorem customs duty with various exceptions (those exceptions involved a higher duty on certain goods for revenue purposes)

In 1921 under strain from an 'unprecedented' deficit, the Government of India again turned to tariffs to generate more public revenues. The duties on cotton manufactures were increased from 7.5 to 11% and certain luxury goods such as cars and watches were charged higher duties of 20%²⁹. Despite their recommendation against export duties because of the potential harm they could do to Indian producers, in practice export duties were raised on goods including jute and tea³⁰. Between this Commission's report and the beginning of World War Two, taxes were introduced or increased for protective purposes on around 10 different goods including iron, cotton and sugar. Those heavy industries that were protected in this period benefitted too from the expensive rupee which made imports of foreign machinery and capital goods cheap.

At the height of the depression imports into India declined. Had the tariff rates remained unchanged, this would have led to a dramatic decline in British Indian import customs revenues. To avoid this, the government increased tariffs in February 1930, January 1931 and September 1931. Although this helped

²⁹ Government Central Press, *Report of the Indian Fiscal Commission 1921-22*, Simla, p13

³⁰ IOR/V/16/363, Budget for 1921-22

prevent a collapse in import customs revenues, they declined nonetheless³¹. In British India, customs revenues fell moderately, around 10% or Rs 48 million, between 1929 and 1931. The main components of India's imports in the interwar period were consumer goods such as paper and alcoholic drinks, raw materials and capital goods such as heavy machinery. During the depression the relative weights of these components of imports shifted away from consumer goods towards heavy machinery. Tomlinson interprets this as a reflection of the shift towards import substitution in consumer industries in this period³². However, in this period Indian industry protectionism might have been supportive to some extent, but Indian industry suffered against a currency policy which made Indian exports expensive in overseas markets. This made it more difficult for Indian exporters to compete against upcoming industrial powers like Japan. In British India, the decline in customs revenues destabilised its finances and there were several years of large budget deficits at the beginning of the decade.³³

The within India distribution of customs revenues across indirectly and directly ruled areas was a controversial issue in early twentieth century India. The customs taxes raised on goods originating outside India and destined for the Princely States accrued to British India, not to the States themselves. Most States

³¹ Tomlinson, *Political Economy of the Raj 1917-1947*, Palgrave, 1979, p123

³² Tomlinson, *Political Economy of the Raj 1917-1947*, Palgrave, 1979

³³ The finance member described the budgetary pressures faced in the early 1930s as a result of declining tax revenues in his budget speech for 1935: "...At the outset revenue was falling away too rapidly for us to keep pace with the situation, and in 1930-31 and 1931-32 we incurred deficits which were larger than the amount set aside each year for the reduction of debt. In the middle of the latter year, however, we took drastic emergency measures by way of retrenchment, cuts in pay, and taxation, the objective of which was that the position should be so restored by March 31 1933 as not only to produce equilibrium for the future, but to create a soundly balanced position for the two years 1931-32 and 1932-33 combined. These steps, as I recorded in my budget speech last year, fully succeeded in their object, and I may briefly remind the House of the figures as now shown in the final accounts." IOR/V/16/395, Budget proposals for 1934-35

were prevented by treaties from charging their own customs duties but in the nineteenth century the British Indian authorities had made little attempt to enforce the terms of the treaties with the States regarding customs. Unlike most of India in the nineteenth century, Travancore and Cochin received significant revenues from customs. They had both secured the right under the 1865 Interportal Trade Convention to impose export taxes on some internationally traded goods, notably pepper. The export tax on pepper had been an important source of public revenues in the States since before the British period. Export taxes remained an important revenue source in Travancore throughout the early twentieth century.

In the nineteenth century, very low customs tariffs were in place in India yielding a small proportion of total revenues. So, at this time, there was a degree of tolerance shown to States which broke their treaties by charging customs at their borders on the sly. However, from the beginning of the twentieth century, when customs tariffs were increased, the British began policing customs regulations vis-à-vis the States more rigorously. At the same time, the States were alive to the growing revenues coming from customs and resented the constraints imposed on them in this area by their treaties with the British.

The rules governing the States' customs arrangements were bewilderingly varied. Even the British themselves struggled to master the intricacies of the system. When the Under Secretary of State for India asked for a full list of the States' customs arrangements in February 1933, the Political Department replied

that “full information showing which States do and which do not levy their own customs duties” was “not available”.³⁴

Some States, including Hyderabad, were allowed to impose customs duties on goods crossing into their territories from British India. The Hyderabadi treaty dictated that the State was allowed to charge a maximum of 5% customs on both imports and exports³⁵. By contrast, Mysore, Travancore and Cochin were prohibited from charging customs duties on most goods from British India under the terms of their treaties. Mysore, in fact, charged neither import nor export customs duties³⁶. The 1865 Interportal Trade Convention determined the customs rules applied to Travancore and Cochin. But Travancore was at liberty to develop her own export taxes as long as they are not above 5% of the value or ordinary exports, 10% on timber and Rs 15 per candy of pepper³⁷. In Travancore export duties were levied on copra, coir, coconut oil, coconuts, tea, pepper, ginger, jaggery, salt, fish, arecanuts and tamarind.³⁸

In the interwar period Travancore experienced growing competition in its traditional export markets such as coconuts. Travancore, together with Cochin, her sister State, were important international producers of coconuts³⁹. In the inter-war period, Travancore’s share in the international coconut market slipped

³⁴ IOR/L/PS/13/23, Levy of Customs Duties by Indian States, Political (Internal) Department

³⁵ Government of India, *Imperial Gazetteer of India: Hyderabad*, New edition, published under the authority of His Majesty's Secretary of State for India in Council. Oxford: Clarendon Press, 1909, p62

³⁶ Report of the Indian States Committee 1928-1929, London, HMSO, 1929, p42

³⁷ IOR/V/10/2091, Travancore Administration Report 1940-41

³⁸ IOR/V/10/2091, Travancore Administration Report 1940-41

³⁹ In 1931-2 Travancore accounted for over 40% of the Indian cropped area in coconuts. Thomas and Sastry, *Commodity Prices in South India 1918-1938*, University of Madras, Bulletin of the Department of Economics, 1940, p11

as cheaper supplies came onto the market from Ceylon⁴⁰. Qualitative sources reveal that in the 1910s most of the customs revenue collected in Travancore was from the export duty on coconuts and coconut produce⁴¹. Travancore also had an important tea plantation industry whose markets were far distant from her South Indian shores. At the beginning of the twentieth century, rubber was added to the list of cash crops in the Kerala region. It was introduced by the British from Brazil in 1904. This product was grown almost entirely for export to Europe. Between 1904 and 1917 the area allocated to rubber trees had grown to 29,640 acres, helping to supply Britain's wartime needs⁴². Other important Travancorean exports in addition to coconuts and tea were coir (coconut husk fiber) products, rubber and spices such as pepper and ginger.

The stagnant Indian economy of the 1930s combined with growing competition in Travancore's traditional export markets put pressure on real wages. From 1935 onwards as clearly shown in Figure 2.4, wages slumped even for skilled artisans. To construct Figure 2.4 below, I collected nominal male daily wage data for four professions from *The Statistics of Travancore* series of publications. These professions range from the least skilled: man cooly to skilled artisans such as brick moulders, carpenters and granite stonemasons. Since price indices do not exist for Travancore in this period, I have deflated the nominal

⁴⁰ In another hit to the industry, over the inter-war period, coconut oil lost its comparative advantage as an input for margarine. As refining processes improved, other, cheaper oils such as whale fat and groundnut oil could be used to make margarine and the international market for coconut oil shrank. Thomas and Sastry, *Commodity Prices in South India 1918-1938*, University of Madras, Bulletin of the Department of Economics, 1940, p11

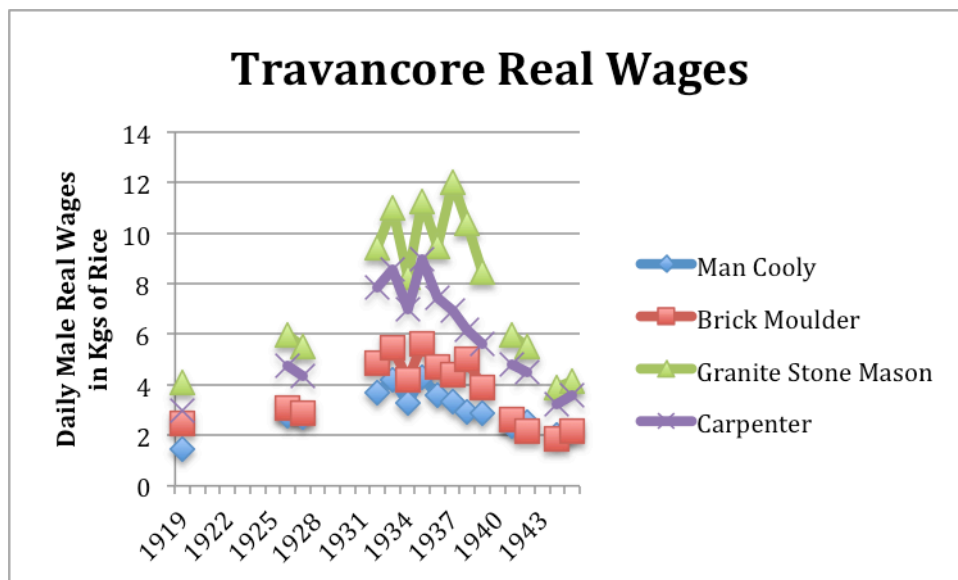
⁴¹ IOR/V/10/2076, Travancore Administration Report 1909-1920

⁴² Tucker, 'The Depletion of India's Forests Under British Imperialism: Planters, Foresters, and Peasants in Assam and Kerala', in Worster (ed.) *The Ends of the Earth: Perspectives on Modern Environmental History*, Cambridge, Cambridge University Press, 1988, p138

wages by rice prices, also sourced from *The Statistics of Travancore*, for each year giving a real measure of wages I have termed 'rice wages'. The rice wage corresponds to the number of kilograms of rice workers could buy with their daily wages.

Living standards were further squeezed by an increase in the dependency ratio. Between 1931 and 1941 the workforce in Travancore decreased by 636,000 workers. This was despite an overall increase in the population over the period of nearly one million people (from 5,095,973 to 6,070,018). The economy was shrinking. This implies considerable unemployment and an increase in the dependency ratio in Travancore in this period.

Figure 2.4: Real Wages in Travancore 1919-1943



Source: Statistics of Travancore, Various Editions

In terms of public finances, these events threatened Travancore's customs revenues by undermining her traditional export industries. The development of

the rubber industry in the State in the early twentieth century may have presented some hope of a new source of international trade and customs revenues. However, much of the output in this sector was sold in British India. The development of Travancorean agricultural products sold in British India did not add to the taxable base in the State since customs tariffs were not allowed on trade between Travancore and British India under the particular terms of Travancore's treaties.

In the early twentieth century, Travancore continued to use export duties to a greater extent than other Indian regions. In 1928 Travancore extended its export duty on tea to exports to British India even though this had earlier been prohibited. This demonstrates that Travancore had the ability to alter some aspects of its customs policy with respect to foreign countries and also with the paramount Power⁴³.

Another unusual aspect of Travancore's customs arrangements was that it received a share of the customs collected at the British port of Cochin. The governments of Cochin, Travancore and the British Indian Province of Madras shared the customs revenue from Cochin port under a complex arrangement made in 1925. Each party contributed to the capital investment of upgrading the port facilities⁴⁴. The port was technically an enclave of British India surrounded by Cochin State and it was the best quality port near to Travancore through

⁴³ Travancore budget 1927-1928 discussion: "consequent on the abolition of export duty on tea by the Government of India, we shall not have to pay to them a moiety of the export duty levied by us in respect of Travancore tea shipped from British Indian ports. We have also had to extend our export duty on tea exports for consumption in British India, which were till then exempt from our tax.", Mr R K Ramasubba Aiyar was Financial Secretary to the Government of Travancore, Legislative Council Proceedings 1927. Government of Travancore, Kerala State Archives

⁴⁴ Travancore Administration Report 1938-39, p162-3

which most of the State's international trade was conducted⁴⁵. The terms of the 1865 Interportal Agreement between Travancore, Cochin and the British Indian government applied alongside the new 1925 customs agreement. The earlier agreement stipulated that Travancore and Cochin could only impose import duties on a narrow range of goods from British India (namely salt, tobacco, opium and spirits), further Travancore and Cochin had to apply British Indian customs rates to goods imported from third countries. The new terms of the 1925 agreement related to the distribution of the customs revenues from the new Cochin port between the three parties⁴⁶. The value of this 1925 deal to Cochin and Travancore combined in terms of new customs revenues was estimated for the year 1932 at Rs 12.7 lakhs⁴⁷. Customs revenues in Travancore increased in the late 1920s and early 1930s when the revenues from this scheme began to flow.

⁴⁵ "None of the Travancore ports seriously competes or is likely to compete with British Indian ports and they may be regarded as serving the needs of the population of Travancore alone...the port of Cochin is in an entirely different class in that it possesses a harbour in the true sense. At Cochin the waters of the lagoon from the northern and southern directions join in the harbour, where there is deep scour due in part to the meeting of the tidal and fresh water... The port of Cochin is a British Indian and not an Indian State port; but it is a fragment of British India standing in absolute isolation and its development is dependent upon the co-operation of the neighbouring State of Cochin.", Report of the Indian States Enquiry Committee (Financial) 1932, HM Stationary Office, London, p96

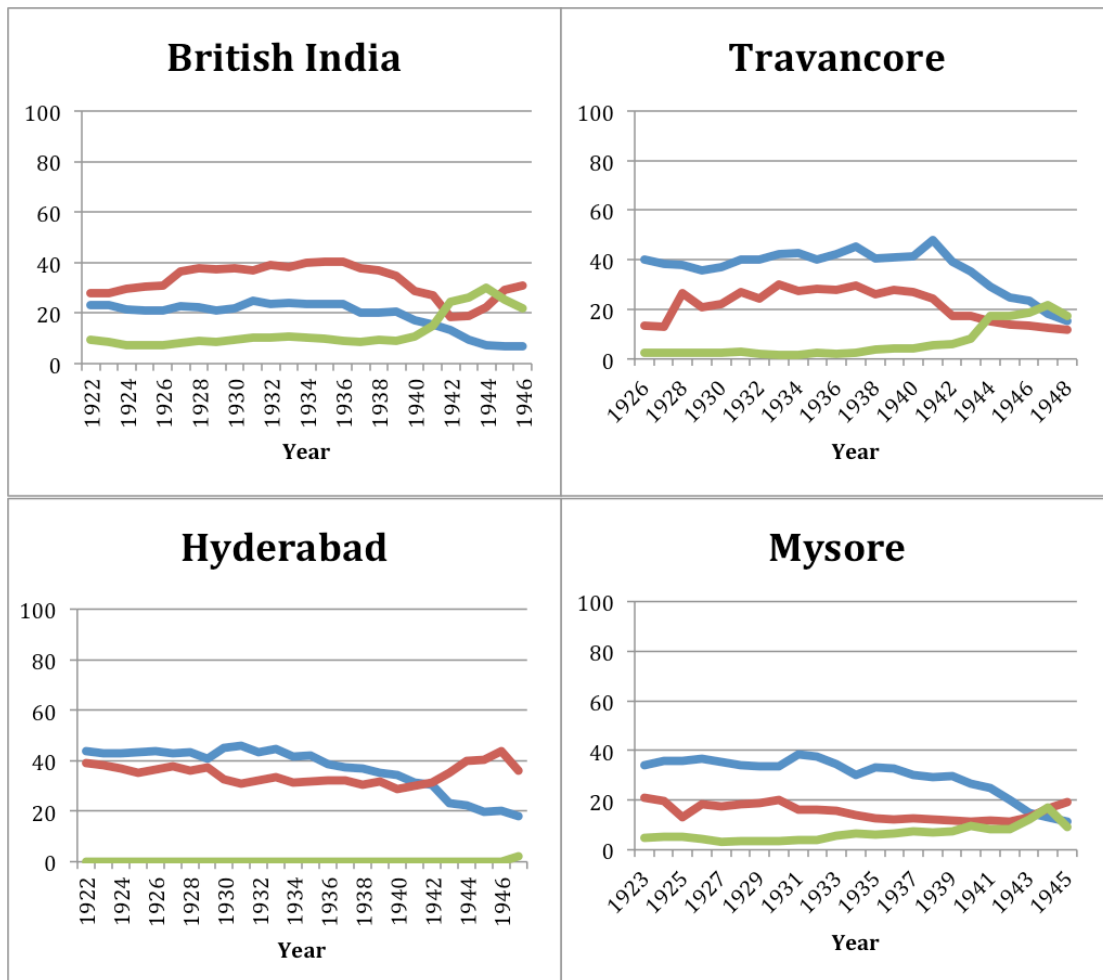
⁴⁶ "At a conference held in November 1934 between the representatives of the Government of India and the Governments of Madras, Cochin and Travancore, the following terms regarding the distribution of customs revenue realised at the port were provisionally accepted:- In respect of any year in which the net customs revenue does not exceed Rs 49.5 lakhs, the Governments of Cochin and Travancore and the Government of India will each receive one third share. In respect of any year in which the net customs revenue exceeds Rs 49.5 lakhs but does not exceed Rs 63 lakhs, the Travancore Government will receive Rs 16.5 lakhs, the Cochin Government will receive one-third of the net customs revenue and the Government of India will receive the remainder. In respect of any year in which the net customs revenue exceeds Rs 63 lakhs, the Travancore Government will receive Rs 16.5 lakhs plus six percent of the excess over the 63 lakhs. The Cochin Government will receive Rs 21 lakhs plus ten percent of the excess over Rs 63 lakhs and the Government of India will receive the remainder". Travancore Administration Report 1938-39, p164

⁴⁷ Report of the Indian States Enquiry Committee (Financial) 1932, HM Stationary Office, London, p287

Regional Comparison of The Tax System

Figure 2.5 below allows for a comparison of the sources of public revenues in British India, Hyderabad, Mysore and Travancore in the 1920s, 1930s and early 1940s. The most important differences revealed by the figure is the greater importance of indirect sources of tax in British India than in the three large states. This is largely because of the disproportionate collection of Indian customs revenues by British India. This meant that the States were more reliant on traditional forms of taxation for longer than British India. These traditional taxes included the land tax, the salt tax and taxes on opium. Income tax will be considered in more detail in the direct taxation section below. However, the figure shows that it became a more important source of revenue in all regions over the period. In addition, income tax was a more significant part of the tax system in British India throughout, though Travancore and Mysore caught up to some extent in the 1940s.

Figure 2.5: Percentage of Total Revenue from Respective Taxes 1922-1948



- Traditional Taxes
- Excise and Customs
- Income Tax

Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954. The three measures here do not sum to 100%. Excluded categories are various miscellaneous taxes such as registration charges and the tribute. Traditional taxes = salt, opium and land tax. Travancore: Traditional Taxes comprises Land Revenue, Opium and Ganja and Salt Revenue. Mysore: Traditional taxes comprise only land revenue – this State had no opium or salt revenue. The State also collected no Customs taxes. Hyderabad: Traditional Taxes comprises Land Revenue, the Berar Rent and Opium, the State had no salt revenue.

Some States had to import their salt from British India, having been prevented from making it themselves under the terms of their treaties. Travancore, however, was unusual in being allowed to produce and sell its own salt provided that it was sold at the British Indian price. As a coastal State with easy access to salt water, Travancore was able to produce enough salt to meet its own demand⁴⁸. It also gained significant tax revenues from the salt tax, at similar proportions of total revenues as in British India⁴⁹. So, much of the traditional tax category in Travancore was made up of salt taxes rather than land taxes which were more significant in the other two large States.

In her work on colonial Africa, Gardner describes how in the African colonies badly affected by the Depression, significant retrenchment in public expenditure was effected in the early 1930s⁵⁰. By comparison, there was much less tax volatility in Travancore in the same period this is mainly because customs revenues held up in Travancore. This could be a result of Travancore's unusual types of customs taxes, comprised mainly of export taxes on high value goods like pepper. This model of customs tax made Travancore's customs revenues dependent on international demand rather than import tariffs which were influenced by domestic demand.

Figure 2.5 above shows that the composition of tax revenues altered over the period. Nevertheless, existing estimates for British India indicate that the proportion of national income collected in taxation was consistently 5-7% and

⁴⁸ Travancore Administration Report 1938-39, p44

⁴⁹ Author's calculations

⁵⁰ Gardner, L., *Taxing Colonial Africa: The Political Economy of British Imperialism* (Oxford: Oxford University Press, 2012), p66

did not vary over the period⁵¹. So, although the composition of public revenues altered, the Government was not collecting a greater share of national income.

States' Contributions to British Indian Revenues

A dispute arose between Travancore and British India in this period over the original terms of the 1865 agreement. An additional aspect of that agreement was that the British would pay small annual sum to Travancore to compensate the State for the extensive loss of customs revenues implied by its other terms. This sum was set in 1865 at Rs 40,000 annually.

The Travancore government made the case to the 1932 States Enquiry Committee that this amount was no longer a true reflection of the value of customs revenue lost to the State and that its payment should be increased. The ability of Travancore to collect customs revenues on goods imported directly into the State was limited because, although the State had a large coastline, there were few good ports. Travancore estimated the annual value of customs revenue on imports consumed in the State, and mainly imported from British Indian ports, at Rs 57 lakhs, which dwarfs the Rs 40,000 figure, actually paid to them in compensation⁵².

The committee concluded that providing a judgment on Travancore's claim was outside of its terms of reference and Travancore's case went unresolved⁵³.

⁵¹ Roy, T., *The Economic History of India 1857-1947*, Delhi, Oxford University Press, 2000, p319

⁵² Report of the Indian States Enquiry Committee (Financial) 1932, HM Stationary Office, London, p98-103

⁵³ Other states also had customs disputes with the British in this period. In the late 1920s and early 1930s Nawanagar lobbied for a change to the customs policy whereby some of the customs

Although the State's freedom was restrained with respect to indirect taxation, their governments were keen to preserve their existing autonomy in this area. There was concern in Travancore that the federal scheme would reduce the State's ability to alter indirect taxes such as customs and the salt tax or that the revenue from these sources would be pooled centrally and so unavailable for "the general expenditure that had to be incurred in connection with the administration of the State"⁵⁴. Several other large and powerful States including Udaipur, Jodhpur and Jaipur shared this concern⁵⁵.

Though Travancore did collect some customs revenue, notably through export tariffs and a share of the customs on imports from the British port at Cochin, as a State with a long trading history it felt particularly strongly about securing greater freedom in this area and felt the terms of the above treaties were unfair. A typical statement in the State legislature in this period urged for a renegotiation of the customs arrangements between British India and Travancore under the terms of the 1865 Interportal Trade Convention:

...It may be the folly of the previous administrators in the matter of surrendering a large portion of customs revenue to the British Government. The whole of Travancore must agitate and see that the Interportal Trade Convention is revised. The British Government must be persuaded to consider our just claims.⁵⁶

One of the reasons that customs and excise made up such a large proportion of British India's revenue after World War One is that British India

paid on goods entering his state could be recovered. Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977). p56

⁵⁴ Mr Komilezhathu Sankaran, Speech in the Sri Chitra State Council, Proceedings of the Travancore Sri Chitra State Council, Vol. 1, Presentation of the Budget for 1933-34, July 1933, Government Press, Trivandrum, 1934

⁵⁵ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p103

⁵⁶ Proceedings of the Sri Chitra State Council, Vol. 1, July 1933, Government of Travancore, Kerala State Archives

collected customs revenues from goods destined both for British India and the Indian States. The Princes consistently complained that the British authorities collected a portion of the tax revenue paid by their citizens⁵⁷. The mooted federal scheme lost the support of the Princes partly because they became concerned that it would be a route to undermine their fiscal autonomy. Since customs were generally collected where goods landed in India, most customs were paid in British India since the States were mostly landlocked. The States' complaints in the early twentieth century linked the limitations on their ability to raise indirect taxes, and the tax revenues from their citizens' consumption, which accrued to British India, with restraining their efforts to invest in social expenditure.⁵⁸

It is clear that a large proportion of the British Indian customs revenue was paid on goods consumed in the States. As a result, State citizens were contributing to British Indian public revenues when they purchased imported goods. The States' contribution to the British Indian customs only became a large figure when the Indian government began introducing more tariffs from the end of the 1900s.

⁵⁷ The development of a broad tax base composed of administratively complex taxes such as customs and excise is widely taken to be an indicator of the sophistication of the tax system. "The rise of rich democracies has brought a gradual march from narrow and expensive taxes toward broader, more efficient taxes like the general consumption tax. ...The earliest tax shift was one in which rulers' arbitrary exactions were replaced by relatively stable and honest customs and excise taxes. It was a transition that took centuries in Europe and has still not taken place in many Third World kleptocracies. ...This first phase of the transition culminated in Britain's development of an efficient customs and excise system in the eighteenth century. ... The development of efficient customs and excise regimes, shape by the rise of new economic elites, improved the overall efficiency of the tax system, but still had a high deadweight cost ratio." See Lindert, P., *Growing Public: Social Spending and Economic Growth since the Eighteenth Century* (2vols., Cambridge: Cambridge University Press, 2004), Volume 1, p302-3

⁵⁸ Thomas, *The Growth of Federal Finance in India Being a Survey of India's Public Finances from 1833 to 1939*, Madras, Oxford University Press, 1939, p384

Before the War, when duties were low, the grievance was not a very serious one, but the total customs and excise revenue of the Central Government has risen from 10 crores before the War to over 50 crores in the current year; and has become the largest and most elastic source of revenue in India today. This expansion has increased proportionately the burden imposed by the Imperial Government on the population of the States... the States have no voice in the determination of tariff policy.⁵⁹

The 1929 Butler Committee estimated that the per capita consumption of imported goods in the States was two-thirds the level of that of British India. Given that the population of the States was roughly one-sixth that of British India (Table 2.2 below), about 16 per cent of goods imported into India were estimated to be consumed in the States. In the financial year 1928-29, 1/6th of the British Indian customs revenue was 6 crores⁶⁰. The Butler Committee, using these crude assumptions, put the figure at 6 crores of rupees for the year 1928-9. Using this crude figure, this would equate to 0.73 rupees per head of the States' citizens (using 1931 census population data). For the three large States of concern here, this would equate to Rs 4,786,830 for Mysore, Rs 3,720,060 for Travancore and Rs 10,538,388 for Hyderabad, assuming that the per head value of imports was equal in all three States.

⁵⁹ Report of the Simon Commission, Volume 2, 1930, p270-1

⁶⁰ Report of the Indian States Committee 1928-1929, London, HMSO, 1929

Table 2.2. Population in British India and Princely States

	Population	
	1921	1931
British India	247,003,293	271,749,312
Princely States	71,939,187	81,237,564

Source: Census of India, Various Editions

Table 2.3: Customs Payments by States' Citizens

	Customs Payments from State's Citizens to British India		
	Hyderabad	Mysore	Travancore
Estimate of Total contribution by States to British Indian Customs Revenue (rupees)	10,538,388	4,786,830	3,720,060
State's contribution to British Indian customs revenue as a % of States revenue (%)	11.8%	12.8%	15.4%
State's contribution to British Indian customs revenue as a % of States customs revenue (%)	67.1%	n/a*	117.9%
1928 public accounts figures used. * Mysore collected no customs revenue. Method of calculation described in the surrounding text.			

Sources: Population data from the 1931 Census of India. Fiscal data are from The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

Table 2.3 above is composed of calculations based on British estimates of the amounts paid in customs by State's citizens and collected by British India. In 1932 Travancore made its own estimate of lost customs revenue. As described above, Travancore had been compensated for lost customs revenue under the 1865 Interportal Trade convention in the amount of Rs 40,000 per year. The Travancore Government calculated in 1932 that in that year the State lost Rs 57 lakhs in customs paid on goods consumed in the State but collected by British India. Using this estimate, net of the Rs 40,000 compensation, Travancore lost Rs 5,360,000 in 1932. This equates to 24% of total revenues collected in Travancore that year, much higher than the 15.4% figure derived from British estimates. As a proportion of total customs revenue collected in Travancore, rather than total revenues, the Rs 5,360,000 figure equates to 191%. The results of these calculations is to show that even States which were able to collect some customs taxes, such as Travancore, lost a significant portion of the customs paid by their citizens to British India.

These calculations do not represent the full fiscal loss of the States to British India. This is because British India also benefitted from the salt tax paid on salt produced in British India and sold in the States as well as the seigniorage on British Indian currency used in the States.

Customs was the focus in controversy over indirect taxes paid by States' citizens but collected by British India and it represented the largest amount of revenue lost to the States. However there were other taxes paid by the States'

citizens which flowed not into the State's but to the British Indian treasury, namely through the salt tax, excise and seignorage.

Revenues from the salt tax were most likely to accrue to British India from the States that were prohibited from producing their own salt and therefore had to import dutied salt from British India. This did not apply to Travancore or Cochin who produced their own salt and benefitted from the tax levied on its sale. The Princes' Standing Committee estimated that the combined contribution of the States to the imperial treasury from the salt tax was Rs 90 lakhs annually⁶¹. In excise, the Nind Committee estimated that the States share of the contribution to British Indian excise was between 15-22% depending on the good⁶². Finally, the British also received significant revenues from mints. Almost all States, the notable exceptions of Travancore and Hyderabad aside, used the British Indian currency. As a result, part of the revenues derived from the British via the currency, were based on collections from the States. In the 1930s it was estimated that the revenue from British Indian mints and currency was Rs 380 lakhs, though it is not clear what proportion of this came from the States⁶³.

Taking two of the largest forms of indirect tax loss from the States to the British India, customs and the salt tax, the estimates presented suggest that the States lost between 10 and 20% of the total revenue paid by their citizens to the British Indian exchequer. This is likely to be an underestimate since it excludes

⁶¹ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977). p57

⁶² D'Souza, *Financial problems of the States in Federal India*, Bangalore City, Bangalore Press 1935, p37

⁶³ D'Souza, *Financial problems of the States in Federal India*, Bangalore City, Bangalore Press, 1935, p40

other potentially significant revenues diverted from the States to British India such as seignorage.

The other impact of the customs system in place was on the State's total fiscal base. Somewhere between 10 to 20% of the taxes paid by State's citizens were lost to their own treasuries and accrued to the British Indian government instead. This represented a shrinkage of the State's fiscal base. The process was well understood at the time and was justified by British officials as an additional contribution by the States to the cost of Indian defence.

It was recognized by contemporary British Indian officials that a significant portion of State's customs revenue actually flowed to the British Indian exchequer:

It is, indeed, obvious that the Indian customs tariff does in fact impose taxation on the inhabitants of the Indian States to the extent that they consume imported goods.⁶⁴

One of the justifications given for the retention by the British Indian authorities of such a large amount of tax revenue paid by States citizens was the increasing cost of defence in the period which the princes had a duty to contribute to. One official calculated that the contribution of the tributes at around £2 million was far below the £8 million cost of defending a third of the continent ruled by the princes⁶⁵.

British India is fully entitled to impose maritime customs for the purposes of India as a whole" Again, the greatly increased cost of Defence and other services which the Government of India performs for India as a whole would have to be considered.⁶⁶

⁶⁴ Report of the Simon Commission, Volume 2, 1930, p270-1

⁶⁵IOR/L/PS/13/573

⁶⁶ Report of the Simon Commission, Volume 2, 1930, p270-1

Tribute Payments

The treaties signed between the East India Company and the Princely States generally included a payment made in cash or kind by the princes to fund their defence. The treaties describe how the Company adopted responsibility for the States' defence against third parties and, in return, the States either funded British trained troops or contributed annual cash payments to the British for defence services. After India became a colony under the British government in 1858 the new colonial government committed itself to upholding these treaties. Over time, most of the in kind payments were commuted to cash. By the end of the nineteenth century the British Indian government was receiving considerable cash payments by the States for their defence, these payments were generally referred to as 'subsidies' or 'tributes'.

The nature of this fiscal link between the States and British India has been neglected in the literature on Indian economic history. The tenacity of the tributes, generally persisting unaltered in cash terms for over a century, had important ramifications for the finances of both the States and British India. The size of the tributes, with very few exceptions, remained fixed in cash terms from the time they were drawn up, or when they were commuted from in kind to cash payments until the end of colonial rule in 1947. This meant that the value of the tributes decreased in real terms with inflation.

Aside from the conventional cash payment from a State to the British authorities, there were also some more unusual arrangements within the tribute system. In the original treaties there were cases where the subsidy was paid for,

not as an annual cash payment or the in kind provision of a battalion of troops, but rather with giving over to the British temporary rights to collect taxes on a tract of a State's territory. The subsidy would then be paid out of the land revenue collected by the British administrators from this land. This was the case for Hyderabad where no annual subsidy was paid to the British because Hyderabad had leased them the fertile, cotton producing area of Berar. Berar was so productive that the British in fact paid a subsidy to Hyderabad in recognition of the large revenues they collected from the territory which were about Rs20 million per year in the 1910s. This equates to about 40% of the total land revenues in the 1910s of the Central Provinces, the British territory which received the Berar revenue⁶⁷.

The idiosyncratic tribute agreements originating in the nineteenth century persisted throughout the colonial period with little systemization and included many inconsistencies. Gwalior paid no subsidy to the British because it had transferred instead the tribute payments from several other States to the British⁶⁸. A small number of States paid tributes both to the British and to other Princely States for instance Rajkot paid a subsidy of Rs 18,991 to the British and Rs 2,330 to Junagadh State⁶⁹. In a small number of cases the British paid subsidies to Indian chiefs, rather than being the recipient. This type of 'reverse' tribute was more common in sensitive border areas. For example, the Khan of Kalat, ruler of a part of what is now Baluchistan in Pakistan was paid £7,000 annually by the

⁶⁷ 'Report on the Revenue Administration and on the Operations of the Land Records and Settlement Departments in Berar 1919-20', Nagpur, Government Press, 1921, IOR/V/24/2558

⁶⁸ Report of the Indian States Enquiry Committee (Financial) 1932, HM Stationary Office, London, p193

⁶⁹ Rajkot Administration Reports for 1935-36 and 1936-7, IOR/V/10/1819, Rajkot Administration Report for 1935-36 and IOR/V/10/1820, Rajkot Administration Report for 1936-37

Government of India⁷⁰. The Afghan government too, though outside of the territory of India, was paid a large annual subsidy by the British Indian authorities from the time of the British-Afghan treaty of 1857, which, at the time, funded around a quarter of the Afghan government's budget. On India's northeastern frontier, the State of Bhutan's rulers were paid a subsidy of 50,000 rupees. The Maharaja of the Northern State of Nepal received 10 lakhs of rupees annually from 1919 for services rendered in the First World War⁷¹.

The tribute system gave some in the British administration disquiet because of its 'feudal' nature, which seemed anachronous to some by the late colonial period. There were also contemporary concerns that the tributes were not set at an equitable level across the States. The most striking example of this inequality was the disproportionately large tribute paid by Mysore State. Another British concern about the tribute system, from the late nineteenth century onwards, was that the States as a whole did not contribute enough in tributes to compensate for their share of Indian defence services. The British had all these concerns about the tribute system from at least the late nineteenth century. A reference work from the late nineteenth century on Indian finance stated:

...It has been generally felt that the Native States throughout India ought to make much larger contributions towards the general expenses of the Empire than we now receive from them. For the maintenance throughout India of peace and tranquillity, they pay, for the most part, almost nothing, and these inestimable benefits are mainly provided for them at the cost of our own subjects...⁷²

⁷⁰ Figures refer to the mid 1940s, Hameed Baloch (ed), *Memoir of Douglas Fell*, Sayad Hasmi Reference Library, Karachi, Pakistan, 2010, p37. Douglas Fell was the Political Agent in Chagai district in Baluchistan in 1946-7.

⁷¹ HC Deb 15 June 1925, vol 185, col 3.

⁷² Strachey and Strachey, *The Finances and Public Works of India*, London, 1882, p228-229

Curzon also raised the issue of the States' contributions to Imperial finance during his Viceroyalty at the beginning of the twentieth century. During his rule a reform that would have replaced fixed nominal tributes with a percentage of States' revenues was proposed, a measure, which would have made the tributes less vulnerable to inflation and more equitable. However, the move was abandoned in the face of Princely opposition:

Some [Princes]... avowed that payment of a fixed proportion of their incomes... would be tantamount to the imposition of a defence tax, an impression which would be particularly undesirable. The Government of India therefore decided to abandon the proposal.⁷³

The 1932 Indian States Enquiry Committee defended the tribute system on the ground that the tributes were analogous to the British Indian provinces contributions to federal finance via their remission to the central government of revenues from income tax. However, it also acknowledged that the system was flawed:

they [the tributes] are both arbitrary and unequal in their incidence on individual States. If they were not so it would be quite possible, and perhaps desirable, to consider their retention as a part of the federal financial system. ...[Differences in] the amount of tribute paid, are largely the result of a series of historical accidents and depend on the circumstances in which the relations of the State and the British Government were stabilized [sic.] or of the exigencies of the time or the policy which then prevailed.... As regards tributes in general we have to advise as to their immediate reduction or eventual abolition... The inequality of payments is so marked, and in some cases their burden so heavy, rising in one case to as much as 40 per cent of the revenues of the State, [Mysore] that we hold that the relief should be immediate.⁷⁴

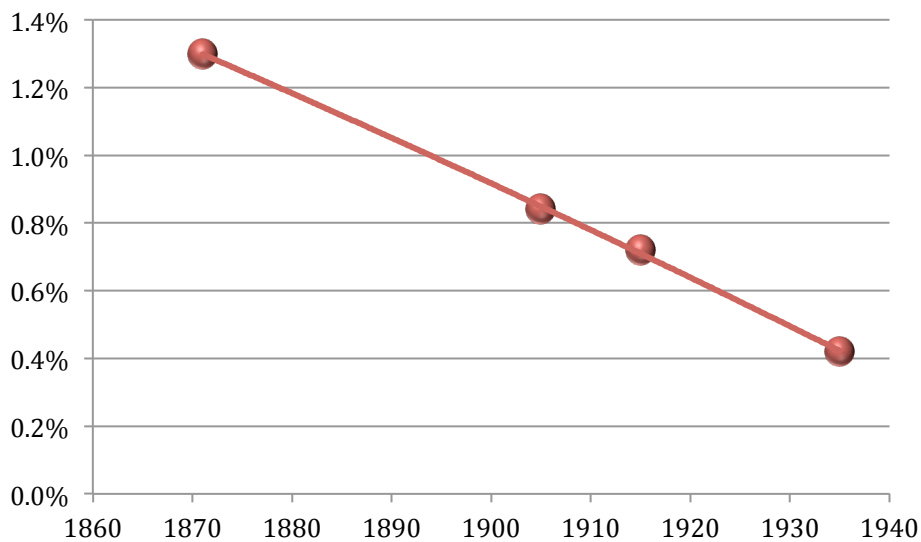
Colonial officials were right to describe the size of the tributes as 'arbitrary and unequal in their incidence'. The amount spent on the tribute varied dramatically

⁷³ Ed Karkaria, *Lord Curzon's Farewell to India: Being Speeches Delivered as Viceroy and Governor-General of India During Sept-Nov 1905 by The Right Honourable Lord Curzon of Kedleston*, Thacker and Co, Bombay, 1907, p101

⁷⁴ Report of the Indian States Enquiry Committee (Financial) 1932, HM Stationary Office, London, p33

from State to State⁷⁵. Mysore's tribute was particularly large in proportion to its total revenues, which precipitated ongoing complaints and diplomatic negotiations between the States' authorities and the British from the late nineteenth century until the end of colonial rule in 1947.

Figure 2.6: Percentage of British Indian Revenue from Tribute



Sources: The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

Perhaps one reason for the inertia in the tribute system was its relative unimportance to British Indian revenues. Though the payments could be very significant for individual states, on the receiving end, for the British the total amount raised by the tribute of all the Princely States summed together formed only a very small proportion of the British Indian revenues and it declined steadily over time. The amount can be established using the total amount received by the British as tributes in the official British Indian accounts. In 1871

⁷⁵ This was pointed out by contemporary commentators for instance D'Souza, a Professor of Economics at the University of Mysore drew attention to the inequality in tribute payments between states in his 1935 work *Financial problems of the States in Federal India*, p19

the tributes formed 1.3% of total British Indian revenue. By 1935 it had fallen to 0.42% of total revenue⁷⁶. This constant, linear decline is evident in Figure 2.6.

While never a very important proportion of British India's revenues in the period considered here, in the late nineteenth century the tribute payment comprised a large proportion of many States' budgets. In 1881 the tribute absorbed 13.7% of state revenues in Travancore and 22.6% in Mysore. Amounts and trends can be seen in Table 2.4 below. These have been calculated by using the State's public accounts to establish the amount paid by individual states in tribute on an annual basis and computing the amount of the State's public revenues expended in this way. The proportion of States' budgets dedicated to tribute declined gradually from the late nineteenth century onwards. Through the growth of State revenues in the early twentieth century and the eroding effect of inflation, the proportion of revenues spent on the tribute in Travancore declined to 5.3% in 1915 and 1.3% of revenues in 1945. In Mysore, the decline was even greater due to a rare renegotiation of the State's tribute payment, discussed below. By the 1930s and 1940s most States were spending only a tiny proportion of their revenues on the tribute. In 1935 the tribute took up 1.4% of Rajkot's revenues, in 1941 it absorbed 2.3% in Jaipur and 1.5% in Cochin⁷⁷.

⁷⁶ Author's calculations

⁷⁷ Author's calculations

Table 2.4: Tribute Payments by Mysore and Travancore States 1881-1945

	Nominal Tribute Payment (Rs)		Nominal Revenue (Rs)		Percentage of State Revenues Paid in Tribute (%)	
	Mysore	Travancore	Mysore	Travancore	Mysore	Travancore
1881	2,450,000	810,652	10,850,991	5,924,963	22.6	13.7
1905	3,500,000	810,652	22,675,538	9,491,160	15.4	8.4
1915	3,500,000	810,652	27,397,000	15,279,386	12.8	5.3
1935	2,450,000	810,652	38,575,622	22,790,591	6.4	3.6
1941	1,937,000	810,652	51,678,573	27,976,329	3.7	2.9
1945	1,937,000	810,652	99,227,199	64,124,710	2.0	1.3

Sources: The Statistics of Travancore, Various Editions, and The Statistical Abstract of Mysore, Various Editions.

Even so, this was revenue denied to the States. Just as the British had longstanding concerns about the flaws in the tribute system, in the States too, there were serious concerns about the arrangements. In two particular cases in the inter-war period, in two of the largest States, disputes about the subsidy were significant enough to effect British relations with the States' governments. The first was Hyderabad's complaint about the administration of Berar and the second was Mysore's protests at its unusually high tribute payment.

In 1853 the administration of Berar had been temporarily taken over by the East India Company, by force, to repay debts owed by Hyderabad State for the Company's military expenses in the region⁷⁸. The arrangement was revised in 1902, giving the British indefinite administration of Berar, and, setting the annual

⁷⁸ A Hyderabad official describes in 1874 the conditions under which Berar became administered by the British: "The repugnance of the Nizam to any permanent cession of territory having proved insuperable, the Treaty of 1853 was concluded for a temporary cession in the nature of a mortgage. But this was only done by compulsion and threats of military occupation, which would have amounted to actual conquest", Foreign and Commonwealth Office Collection, 'Case on Behalf of His Highness the Nizam in the Matter of the Berar Provinces', published online by The University of Manchester, p6

British payment to Hyderabad out of the Berar revenues at Rs 25 lakhs.⁷⁹ However, Hyderabad nursed resentment at the loss of the administration of such a valuable territory and the issue flared up later in the twentieth century. In 1920 the British integrated Berar into the Central Provinces' administration, which enraged the Nizam, the ruler of Hyderabad. Hyderabad then put a case to the Viceroy, Lord Reading (1921-25), for the return of Berar to the State's administration. The Viceroy dismissively replied to the Nizam's requests for the return of the administration of Berar that Indian monarchs did not have the right to negotiate as equals with the Paramount Power and Berar would continue to be administered by the British. This issue cast a shadow over Hyderabad-British relations for at least the next decade⁸⁰. As a result of this episode the Princes sought in 1927 a clearer definition of British Paramountcy. The Butler Committee was formed in 1927 by the British to investigate the issue and it concluded that Paramountcy should not be limited or more precisely defined. In effect the British annexed Berar and thus its resources formed part of the British Indian fiscal base rather than that of Hyderabad. In 1946, when the fate of the States was still uncertain, the financial importance of Berar to the Central Provinces became clear. If the unraveling of the States' treaties with the British occurred, the Central Provinces' finances would have been completely derailed by the loss of the revenues from the territory⁸¹. This instance showed reluctance by the British to alter the existing tribute arrangements in the case of Hyderabad, dismissing the

⁷⁹ *A Review of Hyderabad Finance*, Government Press Hyderabad, 1951, p33

⁸⁰ Copland, I., 'The Hyderabad (Berar) agreement of 1933: A case study in Anglo-Indian Diplomacy', *Journal of Imperial and Commonwealth History*, Vol.6, No.3, 1978, pp.285

⁸¹ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p218

State's claims. This accords with the stagnant nature of most State's tribute arrangements with the British. An atypical example of adjustments being made to a State's tribute occurred in Mysore.

The Mysore subsidy was set at Rs 24,50,000 annually under the treaty of 1799 after the defeat by the British of Mysore's Muslim ruler Tipu Sultan. In 1896 the Mysore subsidy was increased from Rs 24,50,000 to Rs 35,00,000 annually. From this point onwards the Mysorean authorities objected that their subsidy payment was unfairly high. Negotiations over this issue continued between the British and Mysore from the late nineteenth century until independence⁸². This dispute has been hitherto neglected in the literature and it sheds light on the working of the tribute system. The Dewan of Mysore, Sirdar Kantaraj, writing to the Resident of Mysore, Mr. Cobb in 1919 argued that the increase of 1896 made the burden of the tribute in the State too high:

The decision [to increase Mysore's tribute in 1896] had the effect of adding very materially to the already heavy contribution that Mysore was paying towards the charges of Defence and Protection, and placed the State in a position of marked inferiority with other Indian States.⁸³

Another argument made in the Dewan's letter for the reduction of the Mysore subsidy was that it was "on a scale which is far in excess of that required of the population of other States in India" and therefore was inequitable. The data above support this claim. For instance, for almost the whole period between

⁸² The only reference to this episode I have seen in the literature is one line on page 44 of this piece by Mysore scholar, James Manor: Manor, J., 'Princely Mysore before the Storm: The State-level Political System of India's Model State', *Modern Asian Studies*, Vol.9, No.1,1975, pp.31-58

⁸³ IOR/R/2/36/353, Letter of 22nd August 1919 from The Dewan of Mysore, Sirdar Kantaraj to the Resident of Mysore, Mr Cobb

1871-1947 Mysore paid twice as large a proportion of its revenues in tribute as did Travancore.

Later in the letter the Dewan cites Mysore's contributions to the war effort in the First World War as a reason the British should grant the State "relief" from the "heavy burden" of the subsidy⁸⁴. Finally, the Dewan argues that such high tribute payments were "a real impediment to its [Mysore's] economic and educational progress"⁸⁵.

In confidential correspondence from the following year, 1920, between the Resident of Mysore and the Political Secretary of India, the Resident takes up the Dewan's case for the reduction of the Mysore subsidy directly with the British authorities. He recommends to the Government of India that Mysore's subsidy should be reduced. In characteristic civil service style, he presents the case for and against the suggested reduction. The case against was that the Mysore government had "tried to advance too rapidly" and indulged in "grandiose" public projects including opening the State University at Mysore in 1916. He implied that excessive expenditure was the real reason for the State's "financial embarrassments" and not the high level of the subsidy. As for the case in favour of reducing the subsidy, the Resident pointed out to the Government of India that some States of comparable size and importance to Mysore, such as Gwalior, paid no subsidy. In addition Mysore had "shown conspicuous and active loyalty towards the British Government – a condition which has certainly not prevailed

⁸⁴ Mysore donated Rs 180 lakhs to the British for the prosecution of the First World War and Mysore troops served in Egypt, Palestine and Mesopotamia.

⁸⁵ IOR/R/2/36/353, Letter of 22nd August 1919 from The Dewan of Mysore, Sirdar Kantaraj to the Resident of Mysore, Mr Cobb

in some other States". He concludes by recommending to the Government of India that the Mysore subsidy be reduced to its lower, pre 1896, level of 24.5 lakhs instead of the 35 lakhs the State was paying at the time⁸⁶.

The Government of India considered the 1920 Mysore request to lower its subsidy for several years. In 1923 the Secretary of State developed a point of principle on the maximum size of a State's subsidy:

no reduction in the amount of subsidies shall be granted unless the amount of the subsidy plus the military expenditure comes to 15% of the State revenues.⁸⁷

The Mysore government argued strongly against this decision by the Government of India. They said that it represented a temporary patch on the system of subsidies, which was fundamentally unsound and unfair. The Mysore suggestion was to create a new Federal Defence Scheme including all of British India and the Indian States with equitable contributions from all regions. The Mysore authorities further argued that the underlying principle of the British proposal of devoting a fixed percentage of a State's budget to defence was flawed since defence expenditure should rather be determined by external conditions. In their view, external conditions were more peaceful than when the tribute system had first been introduced and therefore military expenditure, and the tributes, should not be increased and should perhaps be reduced. A glance at the figures above suggests another reason for Mysore's opposition to the 15% figure, which is not found in the contemporary records. Although Mysore paid a high, if not the highest, subsidy as a proportion of its revenues, in 1923 it encompassed 10.5% of

⁸⁶ IOR/R/2/36/353, Confidential Letter of 20th January 1920 from Mr Cobb, Resident at Mysore to the Political Secretary of the Government of India,

⁸⁷ Letter from Thompson at the Political Department to Barton, Resident of Mysore on 10th January 1923, IOR/R/2/36/353

the State's revenues and Mysore's combined expenditure on the subsidy and the small State military was 15.4% of revenue⁸⁸. Therefore neither Mysore nor any other State would have secured any significant reduction in its tribute payment under the Government of India's 1923 proposal. Though the British Resident at Mysore was sympathetic to the Mysore authorities' case and even argued in 1924 that "it is politically advisable to abandon tributes and subsidies whose origin is due to historical accidents of the distant past", the subsidy system continued until the end of British rule in India⁸⁹.

Eventually the British did partially accede to Mysore's demands and the Resident's 1923 suggestion. In 1928 the subsidy was reduced by 10.5 lakhs to its pre 1896 level. A telegram from the Viceroy to the Secretary of State of India describes the reasons for this partial accession to Mysore's demand:

I am trying to do what I can ... to induce the Princes to set their house in order, and the present proposal may be regarded as one move in this scheme. We can feel perfectly sure that in Mysore the 10.5 lakhs will not be devoted to unworthy objects and that the people of the State will benefit to the full.⁹⁰

The tribute payments from Mysore were officially reduced to 24.5 lakhs in 1928⁹¹. This had the effect of reducing the proportion of Mysore's revenues spent on the subsidy from 9.7% in 1927 to 6.6% in 1928, a fairly significant decline. In per capita terms the tribute payment in Mysore declined from 0.53 rupees per head in 1927 to 0.4 rupees in 1928⁹². However, Mysore's tribute was still large

⁸⁸ Author's calculations

⁸⁹ 7th July 1924, Letter from the Resident, Watson to the Secretary to the Government of India, Political Department, IOR/R/2/36/353

⁹⁰ IOR/L/PS/10/413, Telegraph from the Viceroy to the Secretary of State for India 11th June 1927

⁹¹ IOR/R/1/1/1451 (1), File No. 9-P, Secret, 1924-1927, Government of India, Foreign and Political Department, 'Reduction by Rs 10.5 lakhs of the subsidy payable by Mysore State'

⁹² Author's calculations. Total nominal tribute payment in British Indian rupees from each state and year divided by the state's population data from the 1931 census.

compared to that of Travancore where in 1928 the proportion of revenue spent on the tribute was just 3.7% and the per capita tribute payment was 0.16 rupees⁹³. Though this was the last material change in the Mysore tribute before independence, it did not stop continued pressure from the Mysore government to eliminate both their tribute and the general tribute system well into the 1940s⁹⁴. The cancellation of the subsidy was one of Mysore's conditions for entering the mooted federal scheme⁹⁵.

In the Berar episode the British showed an intransigent attitude to an Indian Prince's claims for financial readjustments. However, the Mysore subsidy issue revealed that there was some flexibility in the British attitude. The episode could also reflect a greater sympathy by the British for Princely administrations it considered to be 'progressive' like Mysore, against those that were less so, such as Hyderabad. It was much more common for the financial relations between the States to remain unchanged, as in the Hyderabad case. The experience of Mysore, of experiencing any change in the tribute, let alone a more favourable settlement, is exceptional for the Indian States. It was much more common for the fiscal ties between the States and the Paramount Power to 'drift' onwards, essentially unaltered, despite the system's 'accidental' origins, its well-understood inequalities its vulnerability to erosion by inflation.

⁹³ Author's calculations

⁹⁴ The Maharaja of Mysore wanted to secure an agreement from the British authorities that after the war his state's subsidy would be cancelled. In the meantime, he wanted the continued payment of the subsidy to be redefined as a 'war contribution'. IOR/R/2/56/575, Mysore Residency File

⁹⁵ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p172

Chapter 3. Managing the Imperial System of Indirect Rule: 1909-1937. Spending

The key areas of public expenditure explored in this chapter are administrative and royal expenditure and social expenditure. Administration was one of the most important areas of public expenditure in the States and in British India and remained so throughout the early twentieth century. By contrast, Royal expenditure in the States declined significantly, freeing resources for other uses.

By the early twentieth century, some States were consistently presented by the British and their own propagandists as being 'progressive' in terms of their social and economic development. Foremost among these 'progressive' States were Mysore, Travancore and Cochin. Some scholars have argued that the achievements of Mysore, in particular, in the social sphere, were deliberately overstated by the State's own functionaries to increase the State's standing with the British. The public accounts data reveal that in the early twentieth century all the large States, Mysore, Hyderabad and Travancore, devoted increasingly large portions of public resources to health and education. They did so to a much greater extent than British India. This is an important area in which the fiscal policies of indirectly and directly ruled India diverged in this period.

Administrative Expenditure

Across the colonized world administrations composed of significant numbers of European officials were often a significant burden on colonies' budgets. Europeans tended to receive rates of remuneration far in excess of local

wages. This was also true of India. There were very few Indians in the Indian Civil Service (ICS) before 1909 and until World War One the entrance exam to the ICS was only held in Britain. In 1922 the ICS exam was held in India for the first time. Nevertheless, in 1929 there were still more than twice as many Europeans in the ICS than Indians (894 versus 367). By 1940 the balance had reversed with slightly more Indians than Europeans in the service¹. Racial prejudice in administrative recruitment persisted in India. At the beginning of the twentieth century there was widespread objection by British ICS officers to the recruitment of Indian to senior positions in the service.

There were occasions when British administrators' salaries in India exceeded even comparable positions in the home nation. For instance, in the nineteenth century ICS salaries were higher than those of comparable positions in the UK civil service². In other colonial contexts too, European administrators were very well paid. Huillery has calculated the percentage of public expenditure on 130 of the highest paid colonial officials in French West Africa. She finds that over the period 1907 to 1957, the pay of these high ranking colonial officials equated to 13.5% of French West Africa's public expenditure, a greater proportion than was spent on education and health combined³. In the inter-war period nationalist politicians in India criticised the generous rates of pay of British ICS officers in India

¹ Brown, J., *Modern India: The Origins of an Asian Democracy*, Oxford, Oxford University Press, 1994, p247

² Spangenberg, 'The Problem of Recruitment for the Indian Civil Service During the Late Nineteenth Century', *Journal of Asian Studies*, 1971, Vol.30, No.2, p356

³ Huillery, 'The Black Man's Burden' The Cost of Colonization of French West Africa', *Journal of Economic History*, 2014, Vol.74, No.1, p30

In some respects the States' bureaucracies were similar to that of British India. Senior administrative positions in the States were also very well paid. This was most clearly true of the Princes themselves who often received a sizeable proportion of public revenues for their own private uses, this is discussed in detail in the Royal expenditure section below. But high-ranking administrators such as Dewans were also often paid very large salaries. Nevertheless, there were important differences in the administrative cadres in the States compared to British India. Though there were some Europeans employed in the States, sometimes in the position of Dewan, otherwise the administrative staff were overwhelmingly Indian. This might have been an opportunity for the States to economise on administrative expenditure by avoiding the costs of European wage premium.

Comparable information on the total administrative expenditure is available for the large States and for British India. However, more detailed sources on the composition and pay of administrators in the States is sparse. It could be that the States were able employ larger numbers of officials with the same resources because of the lower cost of a system of local recruitment. This is an area worthy of further scholarly attention. Nevertheless, the available sources do allow a comparison of the relative size of administrative expenditure in the States and in British India. They also allow for a tentative comparison of the rates of pay of the upper echelons of both British and Princely administrations and contemporary political debates on the issue.

The Indian Civil Service introduced competitive entrance examinations before the UK civil service. The first exam for the ICS was held in the UK in 1853.

The number of ICS administrators was always very small, especially in relation to the huge size of the colony. In the early twentieth century there only were around 3,500 members of the ICS. Despite the fairly small numbers of ICS officers, their high pay and the limited public revenues meant that administration formed a large proportion of government expenditure in British India. In 1914 administrative expenditure in British India formed roughly 15% of the budget.

Table 3.1: British Indian Administrative Expenditure 1905-1925

	British Indian Administrative Expenditure	
	Total British Indian Administrative Expenditure (Rs)	British Indian Administrative Expenditure as % of Total Expenditure
1905	111,707,340	16.3
1914	121,109,030	14.6
1919	169,941,740	11.5
1925	191,200,000	10.9

Sources: The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

World War One took a great toll on British Indian finances resulting in a period of retrenchment in the early 1920s. The subsequent campaign by the British Indian administration to reduce public expenditure included the administration budget. However, cutting this budget was difficult since the wages of European administrators in the ICS were set in England, in accordance with English labour market conditions and not in line with Indian budgetary

requirements. The 1923 Central Provinces Retrenchment Committee was pessimistic on the prospects of reducing the salaries of European civil servants:

The pay of the All-India Service has been fixed on considerations based on recruitment in England, that is, on a scale of pay likely to attract English candidates...obviously the employment of an agency paid at English rates is more expensive than one paid at Indian rates, and can only be justified on other than merely financial grounds...The demand for the Indianisation of the Public Services is based partly on the ground that an indigenous agency must be cheaper than a foreign one.⁴

There were several obstacles in effecting administrative spending cuts in inter-war British India. In the post World War One years, there was mounting discontent in the ICS over pay and conditions.⁵ During the conflict, recruitment to the ICS had almost stopped and existing officers had had their leave cancelled to maintain numbers. Administrative pay in the ICS declined in real terms as a result of the wartime and post-war inflation. The British Indian administrative policy was also under pressure from nationalist politicians who had increased power after the 1919 constitutional reforms and were exerting pressure to reduce ICS salaries. For example in the Central Provinces the, largely Indian, legislature demanded that British recruits to the ICS be stopped entirely on the grounds that their high cost was not justified⁶. The Viceroy himself did not escape from nationalist criticism over rates of European administrators' pay. Gandhi wrote to the Viceroy, Lord Irwin, in 1930 highlighting the reasons for his salt march of that year. Among his objections to colonial rule was the high pay of civil servants, including the Viceroy:

... Take your own salary. It is over Rs. 21,000 per month, besides many other indirect additions. The British Prime Minister gets £5,000 per year, i.e. over Rs.

⁴ Report of the Retrenchment Committee, Nagpur, Government Press, 1922, p17

⁵ Ewing, 'The Indian Civil Service 1919-1924: Service Discontent and the Response in London and in Delhi', *Modern Asian Studies*, 1984, Vol.18, No.1, p33

⁶ Ewing, 'The Indian Civil Service 1919-1924: Service Discontent and the Response in London and in Delhi', *Modern Asian Studies*, 1984, Vol.18, No.1, p39

5,400 per month at the present rate of exchange. You are getting over Rs. 700 per day against India's average income of less than two annas per day. The Prime Minister gets Rs. 180 per day against Great Britain's average income of nearly Rs. 2 per day. Thus you are getting much over five thousand times India's average income. The British Prime Minister is getting only ninety times Britain's average income. On bended knee I ask you to ponder over this phenomenon.⁷

The internal discontent in the ICS was officially investigated by the 1924 Lee Commission, which was charged with investigating the role of the civil service in India. The Government of India publically stated that “the discontent amongst Europeans in the ICS [was] owing to their pay and prospects not being prosperous”⁸. The Commission recommended pay increases for the ICS, including an increase of 12% for those in senior positions⁹. Other changes included free transport between England and India for European officers and their families and more generous housing and medical allowances for European officers. The total annual estimated cost of the Lee Commission’s reforms was Rs 25 lakhs¹⁰. The report also recommended more rapid progress on the indianisation of the ICS partly as a cost cutting measure since Indians were cheaper to employ. After the introduction of improved conditions for Europeans, as recommended by Lee, the attractiveness of the ICS to European recruits improved.

The British Indian government was caught between conflicting pressures. On the one hand Indian nationalists were campaigning for lower salaries for European ICS members. On the other hand, the ICS themselves and the Lee

⁷ MSS EUR C152/24, Letter of 2nd March, 1930 from Mahatma Gandhi to Lord Irwin, British Library

⁸ Departmental notes on such questions, HD (ESTS), 34/June 1920/B and HD (ESTS) 199/200/March 1921/B, NAI, cited in Ewing, ‘The Indian Civil Service 1919-1924: Service Discontent and the Response in London and in Delhi’, *Modern Asian Studies*, 1984, Vol.18, No.1, p 43

⁹ The Lee Commission, ‘Report of the Royal Commission on the Superior Civil Services in India’, 27th March 1924, HMSO, London, 1924

¹⁰ IOR/V/16/370, Budget for 1925-26

Commission pushed for increased European salaries. At the same time budgetary pressures meant that maintaining the status quo was also impossible. One compromise was to increase Indian recruits to the ICS, which assuaged nationalist demands and provided budgetary savings.

Despite the British Indian administration's attempts in the 1930s to economise on the administrative budget, there was virtually no change in the proportion of the budget spent on administration between 1930 and 1938. In 1930 administrative expenditure was 12% of the budget and in 1938 the same figure was 11%. In the 1920s and 1930s retrenchment was attempted in the Political Department, the body that dealt with British relations with the States. The policy was to reduce the number of positions rather than their pay and allowances on the basis that reduction of pay would reduce the quality of recruits and inhibit efficient work. The policy of non-interference in the states at the time enabled the administration to argue that fewer civil servants were needed in the Political Department¹¹. Some agencies were amalgamated and the staff of individual agencies was slimmed down¹².

Administrative Expenditure in the States

In the late nineteenth century some States professionalized their civil services particularly those with 'progressive' reputations such as Baroda, Mysore and Travancore. For instance Baroda began the process of professionalising its bureaucracy and introducing meritocratic, rather than

¹¹ Ashton, *British Policy Towards the Indian States 1905-1939*, Curzon Press, London, 1982, p74

¹² IOR/L/PS/13/1764, 'Economies in the Political Office'

hereditary, appointments to official positions¹³. Travancore and Mysore had professionalized their civil services by the early twentieth century. Mysore in particular had a reputation for high quality administration which was reflected in its being the chosen site for administrative training for young princes from across India in the early twentieth century¹⁴. However, formal civil service exams were not generally introduced in even the progressive States until the early twentieth century. In 1938 the first Civil Service Exam was introduced in Travancore¹⁵. This was in response to the overrepresentation of high caste Hindus in the administration at that point, which had been the target of protests by marginalized groups such as Muslims, and lower castes¹⁶. Civil Service exams were introduced late in Udaipur in 1941 and Jodhpur in 1942 but were never introduced in some States such as Bikaner¹⁷.

There were many internal factors in the States governing the composition of bureaucracies. Civil service recruitment was often a battleground for opposing communal interests. In Hyderabad these were mainly Muslim-Hindu while in Travancore they were largely Hindu-Christian. In Travancore the social representativeness of the civil service was a controversial issue throughout the twentieth century. This was an expression of a broader tension in the State over the distribution of public sector jobs between the different communities. In the Travancore civil service, the Nairs, the traditional administrative caste, and the

¹³ Hardiman, 'Baroda: The Structure of a 'Progressive' State' in Jeffrey (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p116

¹⁴ 'IOR/R/1/1/1905, Administrative Training of His Highness the Maharaja of Travancore', Government of India Foreign and Political Department, 1930

¹⁵ Travancore Administration Report 1938-39

¹⁶ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p88

¹⁷ Rudolph and Rudolph, 'Rajputana Under British Paramountcy: The Failure of Indirect Rule', *Journal of Modern History*, Vol.38, No.2, 1966, p146

Christians were well represented in the administrative ranks while the lowest caste groups were badly underrepresented. The Nairs' special status was largely because of the close links between the palace and that particular caste as the Travancore Maharajas tended to marry Nair women¹⁸. For example in the Travancore Medical Department in 1945, the earliest year where caste information is available for civil servants in the state, 23 out of 76 senior officers were Nairs, 31 were Christians and none were members of the lowest status castes¹⁹. Historically the high caste Hindus had been over represented in all departments of the State²⁰.

Another reason for the traditional overrepresentation of high castes in the Travancore bureaucracy was the nationalization of the lands and assets of the Hindu temples effected in the early nineteenth century under the influence of British Resident, Colonel Munro. Temples owned the majority of land in the State and the department managing the temples came to be merged with the land revenue department. This was a crucial section of the administration since land revenue dominated the State's income, and because it also had responsibility for the temples, its senior posts could only be filled by high caste Hindus²¹. By the twentieth century other social groups such as Christians and lower caste Hindus strongly objected to this tradition, which prevented members of these communities from serving in high official positions. Eventually, in 1921, as a result of this pressure, the temples department was

¹⁸ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p49

¹⁹ Proceedings of the Travancore Sri Mulam Assembly, 23rd July 1945

²⁰ The overrepresentation of high castes in senior positions was also present in the Travancore legislative assemblies. This generated protest from other social groups who wanted more equal representation across government, the administration and the legislature.

²¹ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p80

detached from the land revenue department allowing for increased diversity in staff of the latter.

In Hyderabad public discussion of the civil service centered on its religious composition and the proportion of non-Hyderabadis. Muslims and those from outside of the State tended to be favoured in civil service recruitment. Over the 1930s the Hyderabad government was increasingly attached to an austere Islamic outlook, which caused tension with the majority Hindu population. Outsiders with knowledge of Urdu and Persian, the traditional Moghul languages, were favoured over those who spoke the local language, Telegu. Of the last Hyderabad Dewans, most came from outside the State²².

In many of the less 'progressive' States, the bureaucracy was an arm of royal patronage with appointments based on loyalty to the sovereign rather than on merit. Some of the small States in North India have been described by scholars as 'blatantly corrupt'²³. The administrative staff in Alwar were described by a Political department official in the following scathing terms:

In general the administrative machinery of Alwar seems to have been organised with so little regard to the real requirements of the State, and to have been staffed in the main by a personnel so untrained and so incompetent that its reorganisation upon a sound basis is now a matter of crying necessity.²⁴

In British India the proportion of expenditure on administration in the twentieth century was consistently around 10% of the budget²⁵. In Mysore, the

²² Leonard, "Hyderabad: The Mulki-Non-Mulki Conflict" in Jeffrey (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p91

²³ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p276, His comment refers to Alwar and Rewa States in modern Rajasthan and Madhya Pradesh respectively.

²⁴ The Maharajah of Alwar was later, in 1934, deposed and exiled by the British. IOR/R/1/1/2443, Report on the Conditions of the State of Alwar, June 1933

²⁵ Author's calculations

proportion of the budget spent on administration gradually fell from over 30% to 25% during the 1930s. Throughout the late 1920s and 1930s the proportion of the Travancore budget spent on administration was 20%. This is double the proportion of the British Indian budget spent on administration in the same period. Research on British colonies in Africa shows that the large Princely States were closer to the colonial norm in terms of the proportion of the budget spent on administration, while British India spent a smaller proportion than average. In a sample of 8 African colonies Frankema shows that the proportion of public expenditure on administration in 1937-38 ranged between 22 and 37%.²⁶

In the Mysore Budget Estimates for 1931-32 there is an Annex listing the salaries of the State's senior administrators²⁷. The combined annual salaries of the heads of each of the Mysore government departments including the Dewan, 16 positions in total, was Rs 363,480 in 1931-32²⁸. This represents three percent of the administrative budget and 1% of the total government expenditure. Extending the calculation to include expenditure on the Maharaja together with the 16 heads of department brings the total to Rs 2,463,480 which equates to 6.9% of the total budget. Around the same time (1937) the wages for

²⁶ Frankema, 'Colonial Taxation and Government Spending in British Africa, 1880-1940: Maximising Revenue or Minimising Effort?', *Explorations in Economic History*, Vol.48, 2011, p148

²⁷ Mysore General Budget Estimates 1931-32, Government of Mysore, Financial Department, 1931, Appendix B "Details of Estimates of Expenditure on Salaries, Establishments and Allowances"

²⁸ Measure is the sum of the salaries of the following positions: Revenue Commissioner of the Land Revenue Department, Chief Conservator of the Forest Department, Excise Commissioner of the Excise Department, Income Tax Commissioner of the Income Tax department, The Chief Inspector of the Mines Department, the Private Secretary of the Maharaja, the Dewan, The Director of the Geological Department, the Census Superintendent, the Trade Commissioner of Mysore, the Chief Justice of the High Court, the Inspector General of the Police Department, the Senior Surgeon of the Medical Department, the Director of Health of the Public Health Department, the Directors of the Education, Agriculture, Industries, Cooperative and Army Departments.

the top 16 members of the British Indian civil service, including the Chief Secretaries of the British Indian Provinces but excluding the Governors of Provinces and the Viceroy, amounted to Rs 673,623²⁹. Contemporary data for the wages of the Viceroy and the Governors are unavailable, making a complete assessment of the cost of the higher ranks of the British India administration difficult. However, if Gandhi's information of the Viceroy's salary for 1930 is accurate at Rs. 21,000 per month, or Rs 252,000 annually, the total administrative bill for the higher echelons of the Mysore (including the Maharaja) and Government of India administrations are of a similar order of magnitude to that of British India³⁰. In the States, Dewans were often European and therefore were remunerated in line with the high salaries of senior ICS officials. Europeans filled some other high positions in the States. For instance in Travancore in 1904 the head of the Nair brigade, a military unit, the Chief Engineer and other members of the engineering staff were Europeans³¹. Some instances of the pay and conditions of Dewan positions include:

...as chief minister of Patiala, Nawab Liaquat Hyat Khan got a monthly stipend of Rs 3000 plus and *inam* worth Rs 51,000 a year for life, and an grant of Rs 1,000 a month for his sons' education in England; as prime minister of Bikaner, Sir Manubhai Mehta drew Rs 5,000 a month, was exempted from customs duty on goods imported for his own use, and got free housing³²

²⁹ Report of the Government of India Secretariat Committee, Government of India Press, New Delhi, 1937

³⁰ Along with the Viceroy, other senior members of the ICS were also paid very high salaries. The monthly pay for Chief Secretaries of the British Indian Provinces was between 3000 and 3750 rupees. The monthly salaries of the British Residents in the states were sometimes even higher with senior positions earning between 3000 and 4000 rupees. Information of Chief Secretaries' salaries from Report of the Government of India Secretariat Committee, Government of India Press, New Delhi, 1937 and Residents' Data refers to early 1940s, Details of the Appropriation Under "Payments to Crown Representative" for 1942-43, IOR/V/16/476

³¹ IOR/V/10/2074, Travancore Administration Report, 1904-5

³² Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p6

Data on the size of the Travancore civil service are not available but there are qualitative sources on the pay of some administrative positions in the State. When Sir C.P. Ramaswami Iyer was appointed Legal and Constitutional Advisor to the Travancore Government in 1931 objections were raised to his salary. Though the post was part time, he was paid Rs 72,000 per year, which was twice that of the Dewan and more than that of the British Prime Minister at the time³³. In 1936 he became Dewan of Travancore and dominated the politics in the State from the mid 1930s until 1947³⁴. Consistent concerns were voiced in the Travancore legislature that the lower ranks of Travancore's public servants were paid less than a living wage while those at the top were paid too generously. Policies reducing the gap between the highest and lowest paid public servants were frequently suggested³⁵. The State Financial Secretary responded to these criticisms in the 1936-37 budget session discussions saying:

As regards the expenditure, the main point raised by all members was the question of the retrenchment. They have stated that the scale of pay and salaries here is very excessive. I would like to state that in relation to the total revenue of the country the salaries do not compare very unfavorably with other countries. In Travancore, it appears that we spend 35.2 per cent of our income on salaries, in Hyderabad it comes to about 40.9 per cent. It is about 35.1 per cent in Mysore and 41.6 per cent

³³ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994

³⁴ As a young man he had been joint secretary of Congress with Jawaharlal Nehru. However, he subsequently distanced himself from Congress and had a brilliant career in law in British India. Throughout his time at the centre of Travancore politics he, a Brahmin, clashed with the Christian community in the state. In her account of interwar Travancore, Ouwerkerk, who knew Sir C.P. Ramaswami Iyer describes him as "Like Napoleon a small man, he was yet larger than life. His outstanding characteristic was his brilliance of intellect; a rapier-keen mind, prodigious learning, an incredible ability in marshaling facts and deploying arguments, brilliance in oratory and conversation, made him India's outstanding constitutional lawyer.", Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p75

³⁵ For example in the 1936-37 budget discussion in the Sri Chitra State Council Mr A Eswara Pillai "My suggestion is that a five per cent cut in the salaries of officers drawing Rs 100 to 200, a ten per cent cut in the salaries of officers getting RS 200 to 300 and fifteen per cent reduction in the salaries of officers drawing between Rs 300 to 500 and 20 per cent for the salaries above Rs 500 must be made by way of retrenchment." In addition, he supported a maximum salary of Rs 500 and minimum of Rs 15 of officers of the state. The Proceedings of the Travancore Sri Chitra State Council, 1936, Vol. VIII, Government of Travancore, Kerala State Archives.

in Madras. I am not saying at all that the members should not press for a lesser proportion, but as it is we cannot condemn that they are excessive.³⁶

There was pressure by the Cochin legislature for lower salaries of senior state administrators. For instance during the 1941 budget discussion in the legislative council, there were pleas for reduced expenditure on the salary of the Dewan:

one member ... argued that there was no necessity for a costly Diwan, drawing Rs 4000 and over per mensem, as the incidence of taxation on account of the Diwan's salary in the Cochin State worked out to eleven pies per head of the population against three pies in Mysore and 2 pies in Travancore.³⁷

Archival evidence reveals some insight into the composition of the Cochin civil service. In 1937 a high proportion of the State's expenditure on salaries went towards modestly paid staff. Over 85% of the expenditure on salaries was for those on salaries of Rs 150 per month or less³⁸. This implies that Cochin had a relatively high proportion of modestly paid public functionaries.

The fragmentary evidence on administrative pay in the large States of Travancore, Mysore and Hyderabad indicates that senior officials were very well paid. There are several recorded incidents of administrators being paid as well as European officials in British India and even on similar scales as British mandarins in the UK. Overall administrative expenditure in the States was also very high, on par as a proportion of the budget with British India.

³⁶It is not clear what the sources are for the above stated figures. A breakdown of national accounts by the proportion of public expenditure on salaries is not presented in the sources available for this study. Mr S Sundararajan (Financial Secretary), The Proceedings of the Travancore Sri Chitra State Council, 1936, Vol. VIII, Government of Travancore, Kerala State Archives.

³⁷ IOR/R/1/1/3641, Fortnightly Reports Madras States 1941, Government of India

³⁸ IOR/R/1/1/2912, Fortnightly Reports of the Madras States 1937, Political Department, Government of India

Another element of the States' administrations was the monarchs themselves. The scale of royal expenditure, however, varied dramatically between States with comparatively frugal Maharajas in some regions and Princes with fairly lavish personal expenditure elsewhere.

Royal Expenditure in the States

Most items of public expenditure existed in one form or another in both British India and the States. However, one item of administrative expenditure was unique to the States, namely expenditure on the Royal family. Some well-known studies of the States have dwelt on the grand ceremony of Indian royalty and certain Princes' "conspicuous consumption and extravagant display"³⁹. In the inter-war period the British began to gently encourage the States to spend not more than 10% of public money on the royal household. The actual amounts spent on royal families varied widely from State to State, as revealed by the budgetary data presented here.

Travancore was unusual in having a reputation for very modest royal expenditure. Several instances of restraint in Travancorean royal expenditure are found in the archival record. For instance in 1881 the Maharaja reduced his cost to the public purse while travelling in North India by bearing "all expenses on account of religious ceremonies, offerings, presents, purchases etc. ... from his private purse and thus exuded from the public accounts."⁴⁰ Rosita Forbes, A

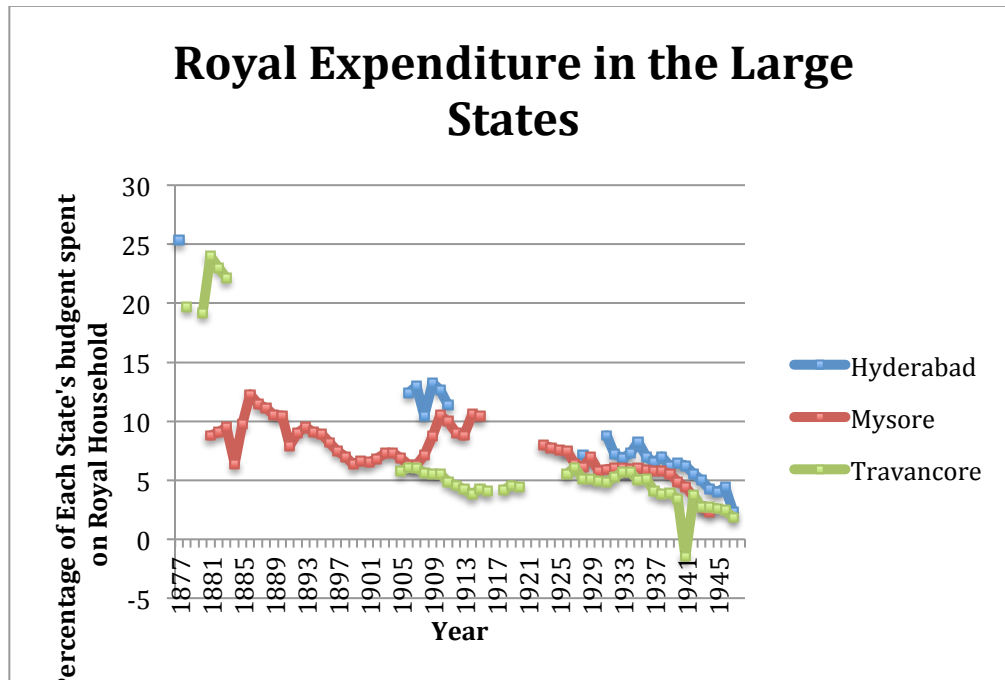
³⁹ These quotations refer to the tiny South Indian state of Pudukkottai which were the subject of a notable ethnohistory. For more on this state see Dirks, *The Hollow Crown: An Ethnohistory of an Indian Kingdom*, University of Michigan Press, 1993, p 317

⁴⁰ IOR/V/10/2062, Travancore Administration Report, 1878 to 1886

British traveller in the State in the 1930s, described royal expenditure there in the following terms:

The revenues of the State being treated as public funds, His Highness barely keeps 5% for himself and his mother. ...[The Maharani] wore no jewels⁴¹

Figure 3.1: Royal Expenditure in the Large States



Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

In line with Rosita Forbes' observation, Travancore's public accounts data demonstrate that the royal family did indeed spend a very small proportion of public funds on themselves. Furthermore, the proportion declined in the course of the early twentieth century. Royal expenditure in the State formed 4.6% of the budget in 1919, and fell to under 4% in the late 1930s⁴². In 1941 it even became negative, implying a net royal contribution to the public purse. In the later years

⁴¹ R. Forbes, *India of the Princes*, London 1939, p213

⁴² Author's calculations

of the war it fell below 3% of the budget, and reached less than 2% at the end of the period in 1948. The surviving budget debates from the Travancore legislature do not contain criticism of the level of public expenditure on the royal family.

Table 3.2: Total Public Expenditure and Royal Expenditure in the Large States

	Total Public Expenditure (Rs)		Total Royal Expenditure (Rs)		Percentage of Total Expenditure Spent on the Royal family	
	Hyderabad	Travancore	Hyderabad	Travancore	Hyderabad	Travancore
1878*	15465220	5952888	3920547	1173907	25.4	19.7
1920	55184483	19574490	4310345	868440	7.81	4.45
1930	71520690	24031295	4310345	1189551	7.45	4.95

Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954. [*], Hyderabad data for 1877. Exchange rate between Hyderabad OSRs and British Indian Rupees: 116OSRs=100 BrRs⁴³

Royal expenditure in Hyderabad was regularised in 1902 under the guidance of a British financial advisor, Mr. G Casson Walker, who initiated an annual payment to the Nizam of Rs 50 lakhs⁴⁴. This annual payment was maintained at the same level almost without exception from 1902 until 1947. Since this figure was fixed in nominal terms, the real value of expenditure on the Hyderabadi royal family gradually declined with inflation. This also had the

⁴³ *Finances of Hyderabad State*, Narayan, 1970, State Archives of Hyderabad, Hyderabad, p12.

⁴⁴ *A Review of Hyderabad Finance*, Government Press Hyderabad, 1951, p33

effect of reducing the proportion of the budget spent on the royal family in the State⁴⁵. In the early twentieth century the Nizam of Hyderabad was considered to be one of the richest people in the world. He reputedly had rooms filled with gold and jewels in his palace. However, in his personal habits he was miserly, wearing tattered pajamas and smoking cheap, locally made cigarettes⁴⁶.

In Mysore, like Travancore, royal expenditure was comparatively modest falling well below the 10% recommended limit throughout the period. As in Travancore, Mysore's royal expenditure declined as a proportion of public expenditure in the 1930s and 1940s declining from around 7% of the budget in the 1920s to 6% in the 1930s and 3% in the 1940s. In Travancore's sister State, Cochin, royal expenditure was around 7% of the budget in the early 1940s⁴⁷.

However, not all Princes were similarly restrained as the monarchs of these large States. In 1935-36 Kotah spent 16% of State revenue on the royal household, in the same year the figure was 17% in Bikaner, this was about twice the comparable Hyderabad figure⁴⁸. In other States, the accounts were massaged to show the 10% target was reached when this may not have been the case⁴⁹.

⁴⁵ By this period the Hyderabad royal family had already amassed great wealth from the state's diamond mines. Though they were mostly exhausted by the twentieth century, the royal family had a huge collection of diamonds, estimated at over 25,000. As a result, the Hyderabad royal family may not have needed additional income from the public purse to maintain a high standard of living. In 2008 Forbes magazine estimated the last Nizam of Hyderabad to have been the 5th richest person ever to have lived with a net wealth of \$210.8 billion in 2008 currency. See <http://www.forbes.com/sites/andrewharper/2012/10/17/taj-falaknuma-palace-a-new-experience-of-palatial-splendor/>

⁴⁶ Allen and Dwivedi, *Lives of the Indian Princes*, Arrow Books, London, 1984, p202

⁴⁷ Author's calculations

⁴⁸ Rudolph and Rudolph, 'Rajputana Under British Paramountcy: The Failure of Indirect Rule', *Journal of Modern History*, Vol.38, No.2, 1966, p146

⁴⁹ This may also have happened in nineteenth century Mysore. Between 1897 and 1912 the Mysore government was engaged in building a spectacular new palace after the old palace had been destroyed in a fire in 1897. The total cost of this project has been estimated at Rs 4,417,913. There is no evidence of this expenditure in the royal expenditure entries in the public accounts. It could be that this enterprise was classified under capital expenditure or public

For instance, in their study of Rajasthan States, Rudolph and Rudolph find that “States often conveyed the impression in annual reports that they observed the 10 per cent limit when they did not, hiding major palace construction in the figures for the public works department⁵⁰. Patiala’s accounts were similarly vague. In 1941 the Political Department made the following observations on Patiala’s public expenditure:

...it is obvious that under PWD [Public Works Department] a considerable part of the expenditure is incurred on the maintenance of the palaces etc. It is not clear how much of the pension charges of Rs 10.08 lakhs related to allowances to the Ruler’s own relations.⁵¹

Contemporary sources demonstrate that in many States, especially those with less developed civil society such as the northern Rajput States, concealed the extent of their royal expenditure in the official accounts. Therefore, all the royal expenditure figures cited in this section should be viewed as lower bound estimates.

In some States royal expenditure was so extravagant that it bankrupted the principality. The Government of India was generally reluctant to grant loans to the States. However, in 1933 they made a rare deviation from this policy in the case of Alwar. The financial situation of the State had become so desperate that the colonial government felt compelled to step in and to enforce the exile of the Maharaja whose ostentatious personal expenditure and excessive taxation they blamed for the State’s parlous financial condition. Among the indulgences of the Maharaja of Alwar was an extensive garage of “95 cars, 67 drivers and 42

works. Ikegame, *Royalty in Colonial and Post-Colonial India: A Historical Anthropology of Mysore from 1799 to the Present*, Ph.D, University of Edinburgh, 2007, p259

⁵⁰ Rudolph and Rudolph, ‘Rajputana Under British Paramountcy: The Failure of Indirect Rule’, *Journal of Modern History*, Vol.38, No.2, 1966, p146

⁵¹ IOR/R/1/1/3472, Political Department, Political Branch, Finances of the Patiala State, Marked Secret

cleaners” and, the Dewan of the State added, “...the other luxury departments are equally extravagantly manned”⁵². In addition, the State had resorted to introducing idiosyncratic and regressive taxes for example, tolls on pedestrians on certain roads and, furthermore, invested very little in social expenditure. The political department concluded, “This is indeed a striking instance of the manner in which the public welfare of the State and its people has been subordinated to the personal interests of the Ruler.”⁵³

The archives reveal examples of baroque financial mismanagement and self-indulgent royal expenditure in other States too. Some of these tales loosely correspond to the colonial stereotype, perpetuated in some historical scholarship, that presents the States as extravagant feudal regimes. Patiala, in modern-day Punjab, was a State whose rulers were close allies of the colonial administration. Maharaja Bhupinder Singh, Maharaja of Patiala between 1900 and 1938, had served with the imperial forces in Europe during the First World War and, later, was Chancellor of the Chamber of Princes from 1926 to 1938. The finances of the State caused the British considerable anxiety in the 1920s, 1930s and 1940s. In 1929 the indebted Maharaja needed to refinance his extensive financial obligations and turned to the Government of India for a loan. At the time the Maharajas debts amounted to Rs 1,92,85,750 which included £17,777 to Spink and Son of London, the antiques auction house and £6,921 to Cartier, the luxury jeweler⁵⁴. Another reason for the Maharaja’s indebtedness

⁵² IOR/R/1/1/2443, Report on the Conditions of the State of Alwar, June 1933

⁵³ IOR/R/1/1/2443, Report on the Conditions of the State of Alwar, June 1933

⁵⁴ Letter dated 15th January 1930 from Charles Watson, Political Secretary to the Government of India in the Foreign and Political Department to Mr Fitzpatrick, Agent to the Governor General, Punjab States. IOR/R/1/1/1881, ‘Patiala Finances: Request of the Patiala Darbar for the grant of a loan to enable them to liquidate their debts Political Department’

was his frequent trips to Europe as his personal expense, representing the Chamber of Princes in his role as Chancellor⁵⁵. As security for a loan he offered the Government of India the revenue streams from the State's railways and irrigation facilities. Responding to the Maharaja's request, the Agent of the Governor General in Punjab, Mr. Fitzpatrick, recommended to the Government of India that it accede to the Maharajas request for a loan to pay off his debts. He argued that:

Patiala is in my opinion a valuable political asset to the Government of India and the empire, and by saving the State and its Ruler from bankruptcy and consequent discredit at no ultimate cost to ourselves we shall be gaining valuable political results and getting good value for money.⁵⁶

Despite the Maharaja's status as a loyal imperial subject and veteran of the First World War, the Government of India declined to grant him the loan. The Political department responded to Mr. Fitzpatrick that:

The present proposal is a complete departure from past policy and if it is accepted, we shall in effect be taking upon ourselves the responsibility for bolstering up any Indian State which finds itself in financial difficulties. This is a responsibility which we ought not to take...We are at present cutting down our expenditure to an absolute minimum and cannot afford to assume liabilities of this nature.⁵⁷

The Government of India recommended to the Maharaja that he introduce fiscal reforms in the State, cutting back on expenditure, including reducing royal expenditure by 9 lakhs of rupees, and generating a budgetary surplus to pay off his loans. They also requested that he submit annual public accounts to them for inspection. The Maharaja agreed to follow their advice. However, subsequently the Political department records show that the Maharaja did not, in fact, follow

⁵⁵ IOR/R/1/1/1820, 'Financial Difficulties of Patiala State', Foreign and Political Department

⁵⁶ Letter dated 22nd December 1929 from Mr. Fitzpatrick, Agent to the Governor General, Punjab States to Charles Watson, Political Secretary to the Government of India in the Foreign and Political Department. IOR/R/1/1/1881, 'Patiala Finances: Request of the Patiala Darbar for the grant of a loan to enable them to liquidate their debts Political Department'

⁵⁷ IOR/R/1/1/1881, 'Patiala Finances: Request of the Patiala Darbar for the grant of a loan to enable them to liquidate their debts Political Department'

through with the envisaged economies. In 1932-33 he had managed to affect only half of the cuts in royal expenditure he had committed to. In that year the Patiala government spent more than 13% of total State revenues on royal weddings⁵⁸. This provoked the Viceroy to declare in a telegraph to the Secretary of State for India in 1933:

I am seriously perturbed about financial position in Patiala where the Maharaja has completely failed to carry out his promise regarding Rs 9 lakh saving in his private budget last year⁵⁹.

The Maharaja chafed at the prolonged attention shown to his State's finances by the British and repeatedly requested that he no longer be obliged to submit accounts to the British. These accounts were of dubious quality. According to the political department they "were [often] not submitted or were so vague and incomplete as to not give a clear view of the situation"⁶⁰. Nevertheless, the Government of India insisted that he continue to submit his State's financial accounts for inspection. Despite this prolonged period of inspection and criticism by the British, the Maharaja of Patiala continued to expend large sums on himself and other members of the royal family. The Patiala royal family continued to take out new loans. In 1941 the new Maharaja raised more funds for the wedding of his sister as well as increased military expenditure⁶¹. The British continued to be concerned about the States' finances into the war years, urging the Maharaja to undertake 'retrenchment', with little result.

⁵⁸ Author's calculations, Information on the Patiala budget compiled from IOR/R/1/1/2422, 'Information on the Patiala budget compiled from the Finance Minister's notes'

⁵⁹ IOR/R/1/1/2422, 'Information on the Patiala budget compiled from the Finance Minister's notes'

⁶⁰ IOR/R/1/1/3472, Political Department, Political Branch, Finances of the Patiala State, Marked Secret

⁶¹ IOR/R/1/1/3472, Political Department, Political Branch, Finances of the Patiala State, Marked Secret

The British were disinclined to put heavy pressure on princes to reduce their personal use of State funds even if deemed excessive. In 1938 the Rajkot monarch agreed with the British that he would reduce his personal expenditure from its then level of 30% of State expenditure. However, the British did not force him to abide by this on the grounds that he had a large family and extensive properties to maintain, which were a great financial burden to him⁶². Rewa and Junagadh States also indulged in ostentatious royal spending and devoted very few public resources to social expenditure⁶³.

Some Princes did not stop at using public money from their own States for their own indulgence. They also ran up bad debts with luxury retailers in London. For instance a representative of Frank Smythson, the luxury stationers, of New Bond Street wrote despairingly in 1928 to the Political Department of the Government of India:

...we do think that there should be some guidance or useful information afforded to British Firms to protect them from incurring what we have discovered to be very often bad debts.

Unless some Official information is afforded there is no means of discovering the stability of Indian Notabilities as they will not give references.

You will, we are sure, appreciate the difficulties of our position, as naturally we do not wish to decline good business, though anxious not to incur further bad debts from scions of Indian Ruling Houses who have no intention whatever of meeting their just debts, and against whom it is useless to proceed⁶⁴.

Neither Smythson, nor the correspondence from other luxury London retailers in the file, mention which of the Princes had failed to pay for merchandise

⁶² IOR/L/PS/13/1499, 'Rajkot Succession', Political Department, Second Half of September 1939

⁶³ For instance, Copland describes "Mahabat Rasulkhanji, Nawab of Junagadh, who ... begrudged spending money on social services for his subjects but thought nothing of squandering two lakhs of rupees on a party and a diamond collar for his favorite pet dog." Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p5

⁶⁴ There were other similar enquiries made by Harrods, Alexander Clark Goldsmiths and the Royal Nurseries. Invariably the Political Office replied that the finances of individuals were private so they were not able to provide the information requested. IOR/L/PS/13/900, 'States' Finances'

ordered. However, it would not have been out of character for those Princes who were reckless with public funds of their own States and ostentatious in personal style, to have also been reckless in their financial dealings with others.

This evidence demonstrates that the stereotypes of princely extravagance do have some basis in reality. The examples cited above from Patiala, Alwar and Junagadh demonstrate that there were cases where public funds were used for fleets of luxury cars, royal weddings and even diamond dog collars. However, there were also instances of Royal restraint as in the case of Hyderabad where the payment to the Nizam was fixed in cash terms for almost 50 years. Travancore seems to have had a culture of modest royal expenditure with the Maharani eschewing expensive jewelry. In the three southern States of Travancore, Cochin and Mysore the proportion of the budget spent on the royal family was low. In Travancore and Mysore it declined to around 3% of their States' budgets by the Second World War, less than half the level recommended by the Government of India.

The evidence on royal expenditure clearly demonstrates the diversity of policies pursued in Princely India. Although the British nudged the States in various ways, for instance, by encouraging limiting royal expenditure to less than 10% of the budget, this was regularly ignored. Princes were able to continue expending large amounts on themselves or running up debts for extended periods with few concrete adverse consequences from the Paramount Power, as in the case of Patiala shows. Nevertheless, there was disapproval of those States who did not follow 'sound finance' or invest in nation building. In some cases this use of 'soft power' could have an impact on State's financial

policies. The British policy in this period of limited interference in the state has been criticized by some scholars who argue that it removed a mechanism of improving governance in the States⁶⁵. However, the evidence presented here on royal expenditure shows that there were mechanisms at work in the large States that limited and reduced extravagant expenditure. This evidence disproves the implication that only direct British intervention could generate administrative changes in the States.

The total percentage of expenditure on administration, including the royal household, was higher in the States than in British India. The States do not seem to have economized on the total cost of their administrations as a result of their greater use of Indian, rather than European, officials. It may be that the States were able to employ a larger number of administrators because of their greater indianisation. However, the available sources do not allow for a detailed comparison of the wages of each rank of administrator in British India and the States. What is clear is that the States did not made significant savings in the total size of their administrative budget relative to British India. This was partly due to their expenditure on the royal families but also because the State's too had expensive administrations. The available evidence indicated that the States' administrative expenditures were no more in line with nationalist demands for economical administration than was British India but that the stereotype of self-indulgent Indian royalty conceals great diversity in the personal expenditure of the Princes.

⁶⁵ Ashton, *British Policy Towards the Indian States 1905-1939*, Curzon Press, London, 1982

Social Expenditure

In the western world, the late nineteenth and early twentieth centuries was a period of radical reform in public service expansion. From the 1880s social expenditure began to grow as a percentage of public expenditure in Western Europe. Subsequently, the experience of widespread unemployment in the Depression of the early 1930s galvanized public support for greater government involvement in the social sector. These shifts in public policy occurred in an intellectual climate where the precepts of classical liberal economics were challenged from many directions. Public provision of social services and protectionist trade policies were both deviations from the classical liberal view of the role of government⁶⁶. Ideas of an expanded role of the state in society had little impact on public policy in British India in the twentieth century. Social expenditure did increase slightly in directly ruled India in the 1920s and 1930s but it remained very low. However, the three large States more closely followed the public policy trends in the western world, by increasing public expenditure on health and education. This was particularly true of Travancore, which was famous for its public investment in social expenditure. Since independence, the region has gone on to be a leader in social development in India.

British India was not alone among early twentieth century colonial administrations in spending a small proportion of its budget on health and education. In Frankema's sample of 8 African colonies between 1911 and 1938,

⁶⁶ An indication in the shift in thought in the Western world in this period is the publication of Keynes' 1926 book *The End of Laissez Faire*, advocating a greater role of the state in society.

education expenditure ranged between 0 and 12% of government expenditure⁶⁷. In her research on African colonial budgets, Gardner finds that “the early expenditure of the colonies [Kenya and Northern Rhodesia] reveals a strictly circumscribed role for the state. Expenditure was concentrated on a combination of administration, defence and infrastructure”⁶⁸.

The comparative experience of social expenditure in British India and the States is an understudied area. Some scholars have made tentative conclusions on the comparative patterns of social investment across British India and the States. One expert in the political history of the States asserts:

Although the evidence is patchy and perhaps not very reliable, it seems safe to say that the States typically taxed their subjects more heavily than the governments of the provinces and spent significantly less *per capita* on infrastructure and social welfare.⁶⁹

However, it is only with a comparison of public accounts that this issue can be more extensively explored. This section will use both the public accounts data and qualitative material to explore the social expenditure policies in British India and the three large States. There are particularly detailed records on Travancore’s policies in this area from the Kerala State archives, which forms the basis of a case study in the section.

British Indian and Princely Social Expenditure

A common colonial policy in the early twentieth century was to delegate the responsibility for social expenditure to local authorities, which tended to

⁶⁷ Frankema, ‘Colonial Taxation and Government Spending in British Africa, 1880-1940: Maximising Revenue or Minimising Effort?’, *Explorations in Economic History*, Vol.48, 2011, p148

⁶⁸ Gardner, L., *Taxing Colonial Africa: The Political Economy of British Imperialism*, Oxford University Press, 2012, p34

⁶⁹ Copland, I., *State, Community and Neighbourhood in Princely North India, c1900-1950*, Palgrave, Hampshire, 2005, p35

involve greater representation of the indigenous population. This occurred in British colonies in Africa as well in British India as after the financial reorganisation in 1919⁷⁰. However the delegation of control was more superficial than it may appear because these institutions often had little power over the size of their own budgets. In the British colonial system it was very rare that indigenous administrators had control over both the pattern of public expenditure as well as the level of taxation. One of these rare cases was the Indian Princely States.

The introduction of 'dyarchy' in British India in 1919 involved splitting the responsibilities and expenses of various government activities between the central and provincial administrations. The budgets of the central and provincial governments were separated. The reforms of 1919 saw the provinces becoming responsible for 'nation building' functions such as health, education and sanitation. Meanwhile areas such as finance and defence continued to be administered by the central government. In addition, the revenue generated from taxes were assigned to the provincial or central levels of government. For instance, the provinces received the tax revenues from the land tax as well as a portion of income tax. As the power for social expenditure became decentralized under the 1919 reforms, local political pressures for greater social investment intensified⁷¹. The devolution of powers to the provinces over social expenditure also had the effect of increasing inter-provincial differences in such expenditure. In the 1920s, when the British Indian provinces had control of education policy, most of them passed compulsory education laws (though this was often

⁷⁰ Gardner, L., *Taxing Colonial Africa: The Political Economy of British Imperialism*, Oxford University Press, 2012, p158

⁷¹ Roy, T., *The Economic History of India 1857-1947*, Delhi, Oxford University Press, 2000, p322

restricted to males). However, this does not appear to have had a significant impact on the allocation of public funds towards social spending, including education. In the 1920s and 1930s the provinces' expenditure outstripped their resources leading to frequent deficits. "Between 1921 and 1933 the total provincial deficit amounted to Rs 23.8 crores"⁷² The Provinces' financial limitations meant that the compulsory education measures were rarely enforced. The provinces complained bitterly that they were allocated the portions of government activity, which were likely to become more expensive over time while their sources of income, such as the land tax, were inelastic.

Nationalists often criticized the British administrations for too little investment in social expenditure⁷³. The 1938 pamphlet by Ahmed, the nationalist economist, states that the colonial administration was "characterized by a deliberate starvation of the nation building services [which included education and health], and reckless overspending on the Army, Police [and] Civil Administration"⁷⁴.

Financial considerations also limited expenditure on public health in British India. Take, for instance this statement of public expenditure on health from the 1922 Central Provinces Retrenchment Committee:

⁷² IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938, p6

⁷³ Not all of those in the Congress movement necessarily shared the view that the fault of the colonial state was that it misallocated public expenditure by not dedicating a larger share of public resources to social expenditure. For instance, Gandhi and many of his followers believed in minimal government in a society composed of semi-independent villages. He was also skeptical of the value of modern technologies such as railways, western education and medicine. So it is unclear what social expenditure policy would have been had Congress ruled an independence India in the early twentieth century. See Brown, J., *Modern India: The Origins of an Asian Democracy*, Oxford, Oxford University Press, 1994, p212

⁷⁴ IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938, p2

The question of the extent to which the State to which the State should provide medical aid is a difficult one. The State hospitals and dispensaries are largely charitable... The witnesses who appeared before us were unanimously against further expansion of the State medical relief, and we agree in this view. The position with regard to existing commitments is a little doubtful. Some witnesses were in favour of closing all institutions, which do not receive adequate local support. Others, regarding such a measure as likely to be unpopular, would prefer closing institutions in towns where private practice might fill the place, and would keep the outlying rural institutions going under the control of local bodies.... At the same time it is clear that, in the interests of the provincial finances, something must be done to restrict further expansion in, if not to curtail the expenditure on, medical relief.⁷⁵

In the early 1920s around 7% of the British Indian budget was spent on health and education⁷⁶. Stringent austerity in social expenditure continued in the 1930s. In the 1934-35 British Indian budget statement says:

So far as concerns expenditure, we are still searching for further economies, and have rigidly maintained our rule that no new item of expenditure shall be admitted unless it is absolutely obligatory or unless it is likely to be economically productive.⁷⁷

The proportion of the British Indian budget dedicated to social expenditure increased slightly in the 1930s reaching 10% by 1937⁷⁸. Health expenditure was consistently around 3% of the budget up to the Second World War while education expenditure was between 5 and 7%⁷⁹. After the election of Indian ministers in the provinces in 1937, under the 1935 constitution, many attempted to increase education expenditure. However, there was little change in education expenditure in the two years Congress ministries were in place: in 1937 British Indian education expenditure was 121,700,000 while in 1939 it was 121,900,000. However, since the Congress ministries were in power for such a short time, radical changes in the allocation of government expenditure would have been difficult. Had events not intervened in 1939, perhaps the

⁷⁵ Report of the Retrenchment Committee, Nagpur, Government Press, 1922, p60

⁷⁶ Author's calculations.

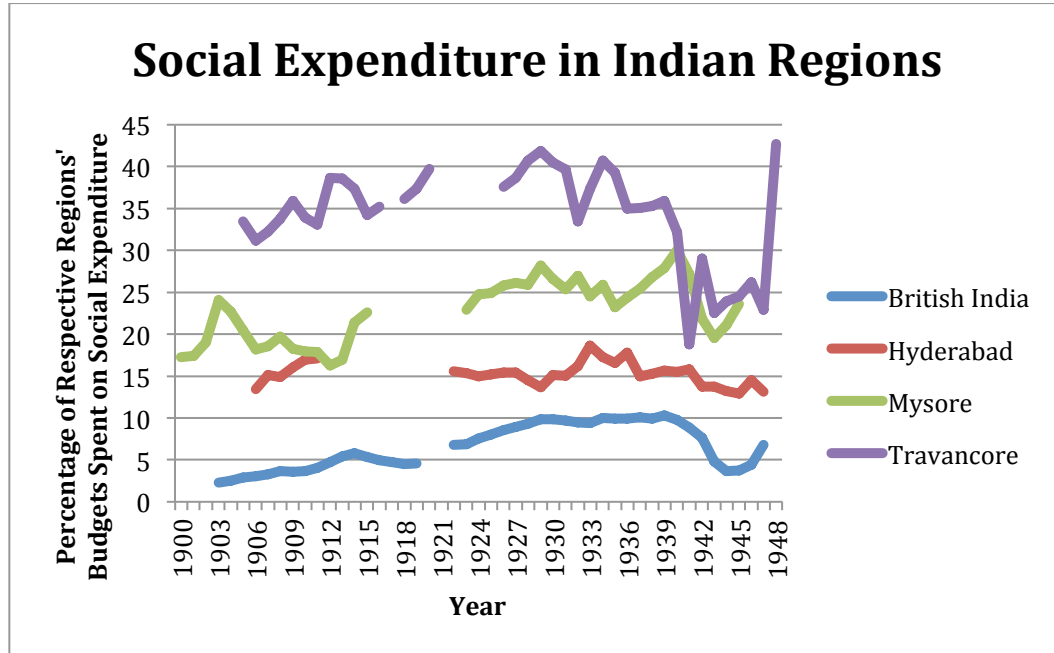
⁷⁷ IOR/V/16/395, Budget proposals for 1934-35

⁷⁸ Author's calculations

⁷⁹ Author's calculations

Congress provincial governments would have made more radical changes to the allocation of public resources.

Figure 3.2: Social Expenditure in Indian Regions 1900-1948



Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

Education and health combined never composed more than 10.2% of the British Indian budget⁸⁰. In the same period in the large States larger proportions of public spending were dedicated to social expenditure. In Mysore, for instance, social expenditure was higher than 10.2% of the budget, the maximum figure in British India, in every year from 1885 to 1947. In addition, some of the larger States already, at the beginning of the twentieth century, spent more than six times the British Indian percentage of their budget on social expenditure⁸¹.

⁸⁰ Author's calculation, social expenditure was 10.2% in British India in 1939

⁸¹ Author's calculations, social expenditure in British India in 1903 was 3.1% of expenditure while in Mysore it was 24.1%

In the case of Mysore, Manor argues that there was an important element of cynical propagandizing by the State's government in the area of social expenditure in order to develop its image as a progressive State. For example, the declaration of compulsory education, he argues, was never intended to be fully implemented and the scheme was underfunded⁸². However, the evidence presented here shows that there was substance to Mysore's presentation of itself as a State that invested in education. For instance, in the 1920s and 1930s social expenditure in Mysore was consistently around 25% of public expenditure. Bhagavan argues that western education was given particular attention by the reforming Maharajas in Mysore and Baroda because it was a relatively objective measure of modernity, unlike the nebulous notion of 'good governance', which could more easily be manipulated by the colonial state⁸³. Members of the Travancore legislative council occasionally made a similar point, that in relation to that State. They describe how Travancore's educational attainment was used as a political tool of the State's government to bolster its prestige inside and outside the State: "Our educational institutions are merely intended to demonstrate the average literacy of Travancore in the Census Report."⁸⁴.

It was only in the twentieth century that Travancore developed its highly distinctive pattern of government spending, which focused on human capital investment. The data from the 1880s reveal that Travancore spent a total of

⁸² Manor, J., 'Princely Mysore before the Storm: The State-level Political System of India's Model State', *Modern Asian Studies*, Vol.9, No.1, 1975, p31-58

⁸³ Bhagavan, M., *Sovereign Spheres: Princes, Education and Empire in Colonial India*, Oxford University Press, New Delhi, 2003, p178

⁸⁴ Mr M Sivatanu Pillai, Legislative Council Proceedings 1927. Government of Travancore, Kerala State Archives

4.5% of its budget on health and education combined, a relatively small amount. By the end of the First World War, Travancore was spending close to 20% of its budget on health and education⁸⁵.

Hyderabad was somewhere between the Travancore and British Indian extremes on social expenditure. From when records begin in the 1870s, social expenditure as a proportion of the budget is far higher in Travancore and Mysore than in Hyderabad. In the first years of the twentieth century Hyderabad spent 2% of the budget on social expenditure, which increased significantly by the end of the 1900s to 15% of the budget. Hyderabad was late, among the large States, to increase its expenditure on health and education. This was unlikely to have been due to a lack of popular demand for education in the State, but rather, as Leonard argues “The [Hyderabad] administration failed to accommodate local political and social demands and convert them into programmes and action.”⁸⁶ It was only in the years immediately before independence there was reassessment of social expenditure and a determination to enact greater social investment in the State. In the presentation of the 1943-44 Hyderabadi budget the Finance Member stated:

The sanctity attached to balanced budget has broken down under stress of war which has demonstrated that expenditure on beneficial activities like Education, Rural and Industrial Development and Public Health bring in an indirect return in raising the general efficiency of the individuals and therefore their earning capacity

⁸⁵ Real per capita government revenue in British India peaked in the Second World War. In Travancore, however, it peaked in the mid 1930s. Real social expenditure peaked in Travancore in the same period as it did in British India. I have conducted per capita and real per capita calculations of Travancorean public expenditure. The patterns that emerge from those data accord with the budget share information presented in this and other chapters.

⁸⁶ Leonard, “Hyderabad: The Mulki-Non-Mulki Conflict” in Jeffrey (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p91

which in its wake should bring in increased revenue to the State in one form or the other⁸⁷.

In many small, north Indian States, social expenditure was very low. Calculations by contemporary British officials put public expenditure on education per head in Alwar State at less than a fifth of that of Travancore (See Table 3.3 below).

Table 3.3: Per Capita Education Expenditure in Various Princely States Early 1930s

Expenditure per head per year on Education in Princely States in the same period (early 1930s)	Rs, A, P
Alwar	0,2,6
Bhavnagar	0,15,5
Travancore	0,15,6
Mysore	1,2,10
Cochin	1,4,6
Baroda	1,6,0
Kashmir	0,8,0
Kapurthala	0,10,10

Source, Wylie, Dewan of Alwar, Report on the Conditions of the State of Alwar, June 1933, IOR/R/1/1/2443

In Frankema's sample of 8 African colonies between 1911 and 1938 health expenditure ranged between 4 (Kenya 1912) and 20%(Mauritius 1938) of public expenditure. The overall time trend, however, across Frankema's sample of countries was for gradually increasing social expenditure in the early twentieth century in African colonies. In Mauritius, for instance, social expenditure increased from 18% of expenditure in 1911 to 23% in 1938.

⁸⁷ *A Review of Hyderabad Finance*, Government Press Hyderabad, 1951, p306-7

Just as the proportion of public expenditure on education was higher in the large States, so was literacy higher in those regions (See Table 3.4 below). In 1931 literacy in Travancore was twice as high as in nearby, directly ruled, Madras. Chaudhary calculates that in 1912-1913 less than 0.5 percent of British Indian per capita GDP was spent on education. In the period leading up to independence, though the proportion spent on education increased, it never rose above 1% of per capita GDP in British India⁸⁸. She writes, “The colonial government would have had to substantially increase public spending [on education] to achieve significant gains [in literacy]”⁸⁹. While there was free public education in several of the progressive States, the British Indian government was reluctant to do the same⁹⁰.

Table 3.4: Literacy in British India and the Princely States 1931

	British India or Princely State	Literates per 1000 population in Indian Regions in 1931 (ages 5 and above, males and females)
Travancore	Princely State	289
Cochin	Princely State	337
Baroda	Princely State	209
Madras	British India	130
Bengal	British India	111
Mysore	Princely State	106
Bihar and Orissa	British India	53
Hyderabad	Princely State	50

Source: Census of India 1931

⁸⁸ Chaudhary, ‘Taxation and Educational Development: Evidence from British India’, *Explorations in Economic History*, Vol.47, 2010, p281

⁸⁹ Chaudhary, ‘Taxation and Educational Development: Evidence from British India’, *Explorations in Economic History*, Vol.47, 2010, p292

⁹⁰ For instance, In 1907 Baroda introduced free primary education for both boys and girls between the ages of 7 and 10. Hardiman, ‘Baroda: The Structure of a ‘Progressive’ State’ in Jeffry (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p117-118

Education outcomes across South Asia varied by caste and by religious community. In Travancore Christians, both men and women, were more literate than those of other religions and the Muslim community had the lowest literacy. Literacy was also correlated with status within religious groups. For example, within Hindus, literacy was strongly associated with caste. High caste Malayala Brahmins had literacy of 61% in 1931, the low caste Parayans were only 5% literate⁹¹. This general pattern was similar in British India where literacy was also highly correlated with caste status and religion. For instance male Brahmin literacy was around 64% in Bengal and 22% in the United Provinces compared with low caste male literacy of 6% and 0.5% respectively⁹².

Travancore stands out among regions of India as having unusually high literacy and public expenditure on education and health. Why did the Travancore government devote such a high proportion of public resources to social expenditure? This issue will be explored in the next section.

Case Study: The Development of Social Expenditure in Travancore

Various explanations have been given in the literature for Travancore's early and high public investment in social expenditure. Some accounts dwell on the more equal gender relations in the State, others on its development of voluntary organisations and social capital, still others on the lingering effect of the annexation threat of the mid nineteenth century⁹³. However, almost all

⁹¹ 1931 Travancore Census, p287

⁹² Chaudhary, *Journal of Economic History* Determinants of Primary Schooling in British India, 2009, Vol.69, No.1, p278

⁹³ Some examples of this argument are Jeffrey, R., *Politics, Women and Well-Being: How Kerala Became a 'Model'*, Macmillan, London, 1992 and Singh, 'We-ness and Welfare: A Longitudinal

accounts include the role of Christian missionaries in cooperating and competing with the Travancore government to provide education services⁹⁴.

Royal attention was directed towards education in Travancore from at least 1817 when famous edict was issued by the ruler, Rani Gouri Parvati Bayi. The edict stated that the Travancore Government “shall defray the entire cost of the education of its people in order that there may be no backwardness in the spread of enlightenment among them, that by diffusion of education they might become better subjects and public servants, and that the reputation of the State may be advanced thereby”⁹⁵. Christian missionaries were already well established in Travancore in this early period and took a lead in English language education as well as education for the lowest castes.

In 1875 the Travancore government began a grants-in-aid education funding system where non-state educational institutions would receive government subsidies⁹⁶. Most of these schools provided education to the lower castes because these castes were barred from attending government schools. The number of aided schools increased quickly from 218 in 1875-6 to 1225 in 1890-91. The growth in grant in aid schools far outstripped that of government schools in the late nineteenth century. While there had been about 200 of each in

Analysis of Social Development in Kerala, India’, *World Development*, Vol.39, No.2, 2010, pp.282-293

⁹⁴ The leading example of this strand of the literature is Kawashima, K., *Missionaries and a Hindu State: Travancore 1856-1936*, Oxford University Press, New Delhi, 1998

⁹⁵ Cited in Kerala State Planning Commission Report, http://planningcommission.nic.in/plans/stateplan/sdr_pdf/shdr_kerala05.pdf

⁹⁶ A similar system was in place in Cochin by 1891. This followed the British Indian model where funds were given through grants in aid. Grant-in-aid schools, private schools that receive a public subsidy, remain an important component of public education expenditure in India today. At the primary level 22% of public education expenditure goes on grant-in-aid schools while at the secondary level it is 50%. These private aided schools generally charge high fees and serve the middle classes. See De and Endow, *Recoup Working Paper No.18*, ‘Public Expenditure on Education in India: Recent Trends and Outcomes’, 2008, p26

the 1870s, by the 1890s there were almost 1500 grant schools and only 280 government schools. The grant-aided schools included both missionary run schools and local indigenous schools teaching in the vernacular⁹⁷.

Alongside the grants-in-aid schools, there were also schools that were directly administered and funded by the government. Following the model of various European missionary schools, the Travancore government had founded several English medium secondary schools by the late nineteenth century.

The purpose of these institutions was to generate the next generation of administrators. These government schools were only open to children from the highest castes⁹⁸. The caste divisions in this period in Travancore were extremely strict. However, at the same time, the lower castes were increasingly demanding access to education. In this way the missionaries helped the Travancore State in the late nineteenth century to meet the demands of its low caste citizens without having to admit them to government schools, which remained the preserve of the high castes⁹⁹.

In 1878-9 the government spent net 18 rupees per year per student on education through its expenditure on both government and grants-in-aid schools¹⁰⁰. At the end of the nineteenth century the grants in aid system imposed common standards and syllabi across schools in Travancore that received public

⁹⁷ Kawashima, K., *Missionaries and a Hindu State: Travancore 1856-1936*, Oxford University Press, New Delhi, 1998, p99-102

⁹⁸ Kawashima, K., *Missionaries and a Hindu State: Travancore 1856-1936*, Oxford University Press, New Delhi, 1998, p91

⁹⁹ Kawashima, K., *Missionaries and a Hindu State: Travancore 1856-1936*, Oxford University Press, New Delhi, 1998, p106

¹⁰⁰ IOR/V/10/2062, Travancore Administration Report, 1878 to 1886

subsidies¹⁰¹. Despite these early efforts, the Travancore government had only scratched the surface of improving literacy and educational attainment in the State in the late nineteenth century. At the end of the nineteenth century the State's development outcomes remained poor, in 1875 the literacy rate was only 5.7%¹⁰².

Unlike in education where missionaries were responsible for the growth in provision in the late nineteenth century, direct government activity led the way in healthcare in Travancore. A vaccination department was founded in Travancore in 1865, which pursued increasingly universalistic public health measures. For instance, in 1878 vaccination was introduced for students, lawyers, hospital inmates and those working in the public sector whose continued employment was contingent on being vaccinated¹⁰³.

The grant in aid funding system was also introduced in health care. This standardized the quality of medical staff in the medical institutions in the State. The Travancore government became involved in providing medical services to women in the late nineteenth century. This extended as far as offering cash rewards for women to have their children delivered by midwives¹⁰⁴. In the inter-war period an extensive range of medical surveys were carried out in the State

¹⁰¹ Mathew, *Growth of Literacy in Kerala: State Intervention, Missionary Initiatives and Social Movements*, *Economic and Political Weekly*, 1999, Vol.34, No.39, pp2185-16, and pp2189-20.

¹⁰² Cited in Singh, 'We-ness and Welfare: A Longitudinal Analysis of Social Development in Kerala, India', *World Development*, Vol.39, No.2, 2010, p284

¹⁰³ Menon, 'Popular Princes: Kingship and Social Change in Travancore and Cochin 1870-1930', *Modern History DPhil University of Oxford*, 1998, p114

¹⁰⁴ Menon, 'Popular Princes: Kingship and Social Change in Travancore and Cochin 1870-1930', *Modern History DPhil University of Oxford*, 1998, p124

to assess the incidence of endemic diseases. These were used as a way of targeting public treatment of illnesses such as hookworm, malaria and plague¹⁰⁵.

By the beginning of the twentieth century, education for low castes and the 'slave' castes had become issue of intense political debate in the State. Social movements representing the interests of the long subjugated castes such as the SNDP Yogam and the SJP Sanghom began to agitate for widening the access to education, which was opposed by high caste groups. In the 1900s riots broke out over a government proposal to allow low caste pupils to attend government schools. A series of policy changes followed these agitations. In 1904 the government declared that it would publicly fund primary education for pupils from 'backward' castes.

In the matter of primary education a resolution was passed declaring that Government have accepted the responsibility of imparting education in the 3 R's to all children in the State irrespective of caste or creed. As a first step, the backward classes were taken in hand and Government have undertaken the entire cost of primary education in schools in which the majority of the scholars come from the backward classes.¹⁰⁶

In 1910 low-caste pupils were allowed to attend government schools and when it became clear that many schools were not adhering to the policy by continuing to exclude them, a new rule was introduced in 1914, which made it mandatory for each government school to have low caste pupils¹⁰⁷.

By the late nineteenth century a culture of high expectations of public services had emerged in Travancore. This was expressed in the increasing number of petitions by citizens to the government for improved medical

¹⁰⁵ Proceedings of the Travancore Sri Chirta State Council, Vol.1, Superintendent Government Press 1934, Presentation of the Budget for 1933-1934 in July 1933

¹⁰⁶ IOR/V/10/2072, Travancore Administration Report, 1903-04

¹⁰⁷ Mathew, Growth of Literacy in Kerala: State Intervention, Missionary Initiatives and Social Movements, *Economic and Political Weekly*, 1999, Vol.34, No.39, pp2186-18

facilities. Many laws were based on written petitions that the government received¹⁰⁸. Popular demand for improved medical services forced a reversal of government health policy in Travancore in 1921. In that year the government reduced the health budget on the grounds that it had “placed medical relief within fairly easy reach of all the people”. This claim was rejected by the population through petitions and organised public campaigns. As a result, the spending decision was reversed two years later.¹⁰⁹

In 1925 the Financial Secretary to the Travancore Government tried to limit the, in his words, ‘staggering’ speed of growth of the education budget in the State¹¹⁰. He did not advocate reducing the education budget, merely stopping its growth. This led to an impassioned debate in the Travancore Legislative Council’s budget discussion of that year. Some agreed with the financial secretary that spending over a fifth of public revenues on education was too much¹¹¹. Others said that the upward trend on education expenditure ought to continue on the grounds that “it is the duty of the State to find the ways and means to increase the revenues” to fund such kinds of public expenditure¹¹². There were some speakers, notably Christian members of the council, who argued for greater involvement by private organisations and missionaries in

¹⁰⁸ Menon, ‘Popular Princes: Kingship and Social Change in Travancore and Cochin 1870-1930’, *Modern History DPhil* University of Oxford, 1998, pp.139-140

¹⁰⁹ Singh, ‘We-ness and Welfare: A Longitudinal Analysis of Social Development in Kerala, India’, *World Development*, Vol.39, No.2, 2010, p289

¹¹⁰ Mr K George, Financial Secretary to the Travancore Government, Speech in the Travancore Legislative Council, July 29th 1925, Budget Estimates for 1101, Travancore Legislative Council Proceedings, Vol.2, Government of Travancore, Kerala State Archives

¹¹¹ Mr T J Matthew, Speech in the Travancore Legislative Council, July 29th 1925, Budget Estimates for 1101, Travancore Legislative Council Proceedings, Vol.2, Government of Travancore, Kerala State Archives

¹¹² Mr V Subba Auyar (Nominated Deputy President), Speech in the Travancore Legislative Council, July 29th 1925, Budget Estimates for 1101, Travancore Legislative Council Proceedings, Vol.2, Government of Travancore, Kerala State Archives

education in the State¹¹³. Yet others urged for a rapidly expanded public education system focusing on primary education to deliver improved literacy among the depressed classes, even at the cost of greater public debt¹¹⁴. Nevertheless, a common refrain among a wide diversity of speakers was that “it is the duty of the State to give free primary education to all the subjects of His Highness the Maha Raja” and that “that the education of the people of a State must in the long run be paying”¹¹⁵.

One of the few Muslim members of the assembly described the necessity of continued expansion in education expenditure to address ongoing educational inequalities in the State:

...Educated communities, such as Brahmins, Christians and Nayars, which have already received education, can afford to call halt. But what about the prospects of communities which are yet backward in education, like mine?¹¹⁶

Grants-in-aid remained an important method of financing education in early twentieth century Travancore. In 1935-36 the amount of public funds given as grants in aid to private educational institutions was increased. In 1938-39 Rs 10,97,771 were spent on grants-in-aid to private educational institutions¹¹⁷. This is equivalent to over one fifth of the total public education budget for that year.

¹¹³ Mr K K Thomas, Speech in the Travancore Legislative Council, July 29th 1925, Budget Estimates for 1101, Travancore Legislative Council Proceedings, Vol.2, Government of Travancore, Kerala State Archives

¹¹⁴ Mr A K Pillai, July 29th 1925, Budget Estimates for 1101, Travancore Legislative Council Proceedings, Vol.2, Government of Travancore, Kerala State Archives

¹¹⁵ Mr M. Subrahmanya Pillai and Mr K L Joseph July 29th 1925, Budget Estimates for 1101, Travancore Legislative Council Proceedings, Vol.2, Government of Travancore, Kerala State Archives

¹¹⁶ Mr P Habeen Mahomed, July 29th 1925, Budget Estimates for 1101, Travancore Legislative Council Proceedings, Vol.2, Government of Travancore, Kerala State Archives

¹¹⁷ Travancore Administration Report 1938-39, p193

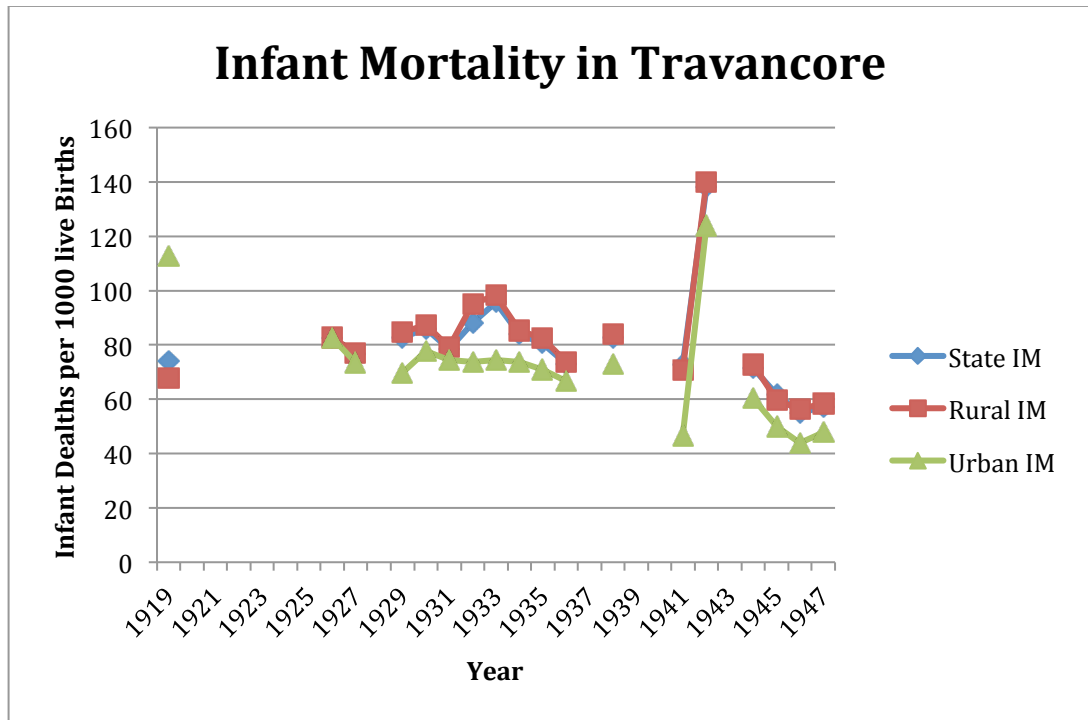
In 1938-1939 there were around 1000 government educational institutions in the State compared with about 2700 private institutions¹¹⁸.

By the early twentieth century the Travancore government's investments began to be reflected in improving social development indicators. There was a gradual decline in infant mortality in Travancore in the early twentieth century from around 80 infant deaths per 1000 in 1919 to around 60 in 1947. Sri Lanka, another South Asian region with early success in social development had roughly similar figures in this period¹¹⁹. Travancore and Sri Lanka were outliers in colonial South Asia. They both had social development outcomes far ahead of most other parts of the region. In the inter-war period, infant mortality in British India was around 150 per 1000 live births, significantly higher than in Travancore.

¹¹⁸ Travancore Administration Report 1938-39, p181

¹¹⁹ In Sri Lanka infant mortality in 1931 was 158 per 1000 and by 1948 it had dropped to 92 per 1000. Jones, *Health Policy in Britain's Model Colony: Ceylon 1900-1948*, Orient Longman, New Delhi, 2004, p265

Figure 3.3: Infant Mortality in Travancore in Rural and Urban Areas 1919-1947



Source: The Statistics of Travancore, Various editions

In most States social expenditure in this period was limited to education and health. Over time these broad categories came to encompass an increasingly complex range of activities for instance, health expenditure in Travancore diversified from vaccination to include sanitation measures and maternity care. In Travancore, however, there was a small but significant additional programme, which could be classed as 'social expenditure', which was targeted at improving the lot of the lowest castes. The activities of the backward communities department of the Travancore government included giving land free of charge to members of low castes on which they could build homes and engage in cultivation.

The States' greater investment in social expenditure presents several further questions. To what extent did the British encourage these policies? The

British tried to claim the credit for the progress in Baroda and Mysore by arguing that the reforms were copied from British India's policies¹²⁰. The reality is more complex. The British both encouraged and discouraged social expenditure in these States in the early twentieth century. In the case of Mysore, the State received informal approval from the British of its more progressive social policies. In the course of the subsidy negotiations, discussed above, Mysore's success in negotiating a lower subsidy seems to have been partly due to the British view that the funds would not be 'wasted' in that State, as it may be in other States.

However, in the case of early twentieth century Travancore, the resident J. Andrew expressed a liberal, market based view of education, dismissing the role of the government in funding this area of social activity: "Travancoreans are willing to pay for the education of their children... and I do not see why Primary Education should now be made free"¹²¹.

In certain cases when the reigning monarch was a minor, the British would administer the State until he came of age. This also sheds light on the British attitude to the role of government in the States. The archival evidence from such periods shows that it was a standard policy to run a budget surplus year on year in order to build up a reserve fund during minority administrations¹²². It appears to have been the pursuit of surpluses, rather than social investment, that governed the policy choices made by British

¹²⁰ Bhagavan, M., *Sovereign Spheres: Princes, Education and Empire in Colonial India*, Oxford University Press, New Delhi, 2003, p180

¹²¹ Cited in Singh, 'We-ness and Welfare: A Longitudinal Analysis of Social Development in Kerala, India', *World Development*, Vol.39, No.2, 2010, p291

¹²² IOR/L/PS/13/997, "Administrative Improvements Initiated by Various States", Political Department

administrators during minority periods in the States. Singh concludes of Travancore's experience in the twentieth century that "welfare legislation in the 1900s was often passed in *opposition to the Raj*, which came to hold the view that the Princely States were going too far in their commitment to welfare"¹²³.

A distinctive aspect of the contemporary Travancorean political environment was the development of social capital. For instance, there were a very large number of different newspapers in the State in which the government's policies were extensively discussed¹²⁴. In 1938 there were 83 different newspapers in circulation in Travancore¹²⁵. This, together with the development of caste-based associations and voluntary groups mobilized the population and exerted pressure on the government to meet their demands for better quality public services. Singh refers to these developments in the State as the emergence of a 'cohesive subnational community', which pushed the government towards greater social expenditure.¹²⁶ A related process in Travancore in this period was the threat of mass conversion of the low caste Hindus to Christianity, often based on the offer of a missionary-school education. This threatened high caste Hindus with the shrinkage of their community and the issue gained more prominence in October 1935 when the campaigner for lower caste rights, Dr Ambedkar, publically encouraged the conversion of low castes to other religions to escape their social stigma within Hinduism. In

¹²³ Singh, 'We-ness and Welfare: A Longitudinal Analysis of Social Development in Kerala, India', *World Development*, Vol.39, No.2, 2010, p285

¹²⁴ This contrasts with some other Princely States, which had a underdeveloped or non-existent media. For example, there was no newspaper published in Kashmir state until 1924. For more oh Kashmir's troubled history see Bose, *Kashmir: Roots of Conflict, Paths to Peace*, Harvard University Press, 2005

¹²⁵ Travancore Directory, 1938, pp984-991

¹²⁶ Singh, 'We-ness and Welfare: A Longitudinal Analysis of Social Development in Kerala, India', *World Development*, Vol.39, No.2, 2010, p283

Travancore the effect was that many leaders of the Ezhava movement in the State began to explore the possibility of en-masse conversion of members of the Ezhava caste to Christianity in the mid 1930s¹²⁷. From the perspective of caste Hindus this was a troubling prospect as it threatened Travancore's status as a majority Hindu State. The result was an intensification of efforts by the Travancore government to address the needs of the lower castes in the social and economic realms.

Table 3.5: Literacy in Early Twentieth Century India 1891-1941

	Percentage Literates, Males and Females					
	1891	1901	1911	1921	1931	1941
Travancore	11	12.4	15	24.2	23.9	47.1
Cochin	18	13.4	15.1	18.5	28.2	41.0
Malabar District	9.1	10.1	11.1	12.7	14.4	n/a
All India	5.8	5.3	5.9	7.1	9.5	15.1

Source: Census of India, Various Issues

Throughout the late colonial period Travancore and Cochin performed significantly better than the Indian average in terms of literacy for both males and females. Table 3.5 above shows that in 1901 male literacy in Travancore was 12.4% and even higher in Cochin at 13.4% while in India as a whole it was only 5.3%. Table 3.6 below shows that similar geographical patterns of literacy persist in modern India. Kerala state today, which corresponds to Travancore and Cochin states and the British ruled district of Malabar, has 96% male literacy and 92% female literacy while the Indian average is 82.1% and 65.5% respectively.

¹²⁷ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p94

Table 3.6: Development Outcomes in Regions of India 2011

	Development Indicators in Modern Indian States, 2011			
	Life Expectancy at Birth (Female)	Life Expectancy at Birth (Male)	Literacy Above age 7 (Female)	Literacy Above age 7 (Male)
Kerala	76.9	71.5	92	96
Tamil Nadu	70.9	67.1	73.9	86.8
Bihar	66.2	65.5	53.3	73.4
Uttar Pradesh	63.7	61.8	59	79.2
All India	67.7	64.6	65.5	82.1

Source: Adapted from Sen, A., and Dreze, J., *An Uncertain Glory: India and its Contradictions*, (Princeton: Princeton University Press, 2013), Appendix.

This is evidence of lingering pre-independence patterns of literacy in post-independence India. “Indian districts appear to have inherited a certain educational endowment at independence and differences in colonial investments were partly responsible for the differences in endowments.”¹²⁸. When the modern State of Kerala was formed in 1956 from the former Princely States of Travancore and Cochin and the British administered district of Malabar, Malabar was significantly behind the other regions of the State in terms of economic and social development and this regional pattern persisted until today¹²⁹. Some authors attribute Malabar’s lagging behind to lower public investment in social expenditure in the colonial period¹³⁰. This is reflected in Malabar’s literacy rates. The above table shows that today Kerala is still a leader in India in terms of social development outcomes. Life expectancy and literacy

¹²⁸ Chaudhary, ‘Taxation and Educational Development: Evidence from British India’, *Explorations in Economic History*, Vol.47, 2010, p292

¹²⁹ Literacy, for example, is still slightly higher in the Travancore-Cochin region of Kerala than in Malabar. India Planning Commission, *Kerala Development Report*, 2008, p61-64

¹³⁰ Nossiter, *Communism in Kerala: A Study in Political Adaptation*, University of California Press, 1982, p15, Dreze and Sen *An Uncertain Glory: India and its Contradictions*, Princeton University Press, 2013, p112

are better for both men and women than in most other States and are far better than the national average.

In British India social expenditure was low throughout the period. This was partly because of the system of federal finance where growing sources of revenue were allocated to the centre rather than the Provinces, which had the responsibility for social policy. Meanwhile in the States, social expenditure accelerated from the beginning of the twentieth century. Hyderabad spent a higher percentage of expenditure on social investment than did British India despite also pursuing budget surplus policy. Travancore is an example of significant State investment in social expenditure. This was the backdrop of its significant post-independence development achievements. States' social investment was not done with British encouragement. In fact, it was often discouraged and disapproved of by the British as the case of Travancore demonstrates.

Over the first four decades of the twentieth century the intensity of social investment in States like Mysore and Travancore increased steadily resulting important change in the allocation of public resources. By the end of the period even Hyderabad with its conservative fiscal practice of consistent budget surpluses spent double the British percentage of the budget on health and education. The following section will explore how it was possible for the States to pursue such different expenditure policies than British India. Was it the case that the States were simply high expenditure regimes because they taxed their citizens more than did British India?

Tax Extractiveness

An important strand in the literature on colonial Indian public finance is the issue of the tax burden. Many nationalist authors argued that India was over taxed. One argument they made was that Indian public resources were 'drained' away from India through the high salaries of Europeans and the expensive colonial administration¹³¹. This argument expresses a dual criticism of colonial taxation policy. The first is that the allocation of public resources was skewed towards expensive European administrators, an issue dealt with in the section on administration above. The second criticism is that Indians were exploited by the colonial government and were over taxed to finance the colonial regime.

One hypothesis that arises is that the States may have financed their investment in social expenditure was by heavy levels of taxation. An assessment of the comparative burden of taxation in British India and the States will give further insight into States' fiscal systems.

The older scholarly argument on 'drain' and colonial exploitation has motivated more recent work that empirically assesses the extractiveness of colonial taxation. In her work on the long-term consequences of direct and indirect rule in India, Iyer controls for some colonial era tax policies¹³². To do this she collects average per capita tax revenue collected as an indicator of fiscal policy from a late nineteenth century compendium of state information. Table 3.7 below presents information from the same primary source.

¹³¹ For a summary of this literature see Roy, T., *The Economic History of India 1857-1947*, Delhi, Oxford University Press, 2000, p106-7

¹³² Iyer, L., 'The Long-Term Impact of Colonial Rule: Evidence from India', *Review of Economics and Statistics*, Vol. 152 (No. 4, 2010), pp693-713

Table 3.7: Population and Revenue of Various Princely States, 1896

State	Alwar	Baroda	Cochin	Jaipur	Mysore	Travancore
Population	682,926	2,185,005	600,278	2,534,357	4,186,188	2,401,158
Total Revenue (Rs)	2,324,310	11,182,320	1,449,280	5,000,000	10,635,570	6,022,540
Per Capita Revenue (Rs per head, per year)	3.4	5.1	2.4	1.97	2.5	2.5

Source: All information is for 1896 and comes from Chakrabarti, *The Native States of India*, London, Luzac, 1896

Some contemporary observers formed the view that the States had a higher tax burden than British India for instance, the Times in 1911 commenting on Baroda said of the Gaekwad Sayali Rao (Ruler of Baroda 1875-1939) that he:

has acquired, especially in this country [Britain], the credit of liberal and progressive ideas... [but] his methods of government remain as autocratic as in most States, and it may be noted that the land revenue raised in Baroda is, on the whole, considerably heavier than in British India.¹³³

Speaking in 1925, Mr. G Raman Menon, a member of the Travancore Legislative Council argued that the tax burden in Travancore was too high¹³⁴. But in 1927 the Finance Secretary, Mr. K N Ramasubba Aiyar, of the Travancore Government dismissed suggestions that the tax burden in Travancore was higher than that in British India:

... I have myself been looking up these figures and I find that against B RS 5 9 as 9 ps ... the incidence of taxation in British India including land revenue, our actual figure is only Sirkar Rs 4.9, that is under Sr Re5.¹³⁵

¹³³ *The Times*, 18 December 1911, cited in Bhagavan, M., *Sovereign Spheres: Princes, Education and Empire in Colonial India*, Oxford University Press, New Delhi, 2003, p67

¹³⁴ Mr G Raman Menon, July 29, 1925, Budget Estimates for 1101, Travancore Legislative Council Proceedings, Vol.2, Government of Travancore, Kerala State Archives.

¹³⁵ Mr K N Ramasubba Aiyar, Legislative Council Proceedings, Government of Travancore 1927, Kerala State Archives

The tax burden was a topic of contemporary debate in the Travancore legislature. Members of the legislative institutions complained that there were not good enough statistics to assess the trend in the tax burden and whether it was too heavy for their citizens or not. Nevertheless, there were some contemporary rough estimates, such as that cited above, made which showed the tax burden in Travancore to be similar to or lower that of British India¹³⁶. Others felt that the tax burden in Travancore was unacceptably high stating that, “Not even a single cash could be added to the present burden on the taxpayer.”¹³⁷

The Frankema Method of Measuring Tax Extractiveness

In his 2010 article on the burden of taxation in various British colonies, Frankema uses an innovative approach to assessing the extractiveness of colonial taxation and applies it to the public finances of various African colonies between 1870 and 1935. The article’s aim is to assess what proportion of workers’ income was taken in tax by British colonial governments. A standard way to address this issue in modern countries is to calculate tax revenue as a proportion of GDP. However, for many colonial economies including British India and especially the Princely States, robust measures of GDP do not exist. To get around this problem, Frankema developed a method using more commonly available data than GDP, namely workers’ wages. With this information he calculates how many days an unskilled labourer would have to work to pay the mean per capita tax burden. The fiscal revenues are isolated from non-tax

¹³⁶ Mr K N Ramasubba Aiyar (Financial Secretary), Legislative Council Proceedings 1927, Government of Travancore, Kerala State Archives

¹³⁷ Mr V S Arumukham Pillai, The Proceedings of the Travancore Sri Chitra State Council, 1936, Vol. VIII

revenues in order to isolate the portion of public resources, which were derived from taxation rather than the revenues from public industries or monopolies. This approach has several flaws, most importantly, as noted by Frankema himself, it ignores the differences in the tax burden across the population. However, given the limited data availability, this method presents one of the only ways of assessing the proportion of income paid in taxation in many colonial contexts including early twentieth century India. Here this method is applied to Travancore tax and wage data to compare the extractiveness of the Princely State to that of the British colonies researched by Frankema. For comparability Frankema uses wages of unskilled urban labourers and the same type of wages are used here. In the Travancore source a 'high' and 'low' unskilled wage is cited for each year. For completeness, working days to pay the tax burden are calculated for both the high and low wage, resulting in the presentation of the Travancore tax burden as a range¹³⁸.

¹³⁸ This is the only respect in which the method used here differs from Frankema. His original data was also recorded as a range. His approach is to convert the range into a single wage figure by calculating an average wage assuming a lognormal distribution. This assumption reflects his belief that the lower wage would have been more frequent than the higher end. The procedure is not replicated here on the basis that presenting a range more faithfully presents the original data. Frankema, 'Raising Revenue in The British Empire, 1870-1940: how 'Extractive' were Colonial Taxes?' *Journal of Global History*, Vol.5, 2010, p456

Table 3.8: Tax Burden in India and other Colonies 1925 and 1937

Place	Number of working days of unskilled labourers required to pay average per capita tax burden	
	1925	1937
Travancore	8.2 to 11.9*	6.1 to 9.5
British India	8.2	9.9
Ceylon	21.5	28
Nigeria	3	6.3
Australia	12.2	13.2
UK (including local taxes)	30	36.8

Sources: For Travancore, The Statistics of Travancore. For Africa, Frankema, E., 'Raising Revenue in the British Empire, 1870-1940: How 'Extractive' were Colonial Taxes?', *Journal of Global History*, Vol. 5 (No. 3, 2010), 447-77, Appendix, Table 2. (* Data for 1926)

The results of Frankema's calculations show that the number of working days taken to pay the colonial tax burden varied widely. For example it took 15 days in New Zealand, 28 days in Hong Kong, 45 days in the Federated Malay States and, on the other end of the spectrum, 3 days in Nigeria¹³⁹. The result of this exercise for India is that the extractiveness of the Travancore polity was very similar to that of British India in the early twentieth century at around 8 to 9 days. One difference between the two, as shown in Table 3.8, is that the proportion of workers' wages spent on tax did increase in British India between 1925 and 1937 while in Travancore it declined¹⁴⁰. Ideally this procedure would

¹³⁹ Frankema, 'Raising Revenue in The British Empire, 1870-1940: how 'Extractive' were Colonial Taxes?' *Journal of Global History*, Vol.5, 2010, p458

¹⁴⁰ Cain, P., and Hopkins, A., *British Imperialism: Crisis and Deconstruction, 1914-1990*, (London: Longman, 1993), p185

be extended to other Princely States. However, unfortunately wage data for States outside Travancore are unavailable.

Table 3.8 above includes tax burden estimates from Ceylon another regional leader in social development expenditure. The number of days taken to pay the tax burden in Ceylon is significantly higher than in either Travancore or British India, at over 20 days of labour in both time periods.

Overall, the calculations for Travancore underestimates the tax burden in the State because the British Indian State collected some of the customs and salt taxes paid by States' citizens. Similarly this is an overestimate of the British Indian tax burden for the same reason.

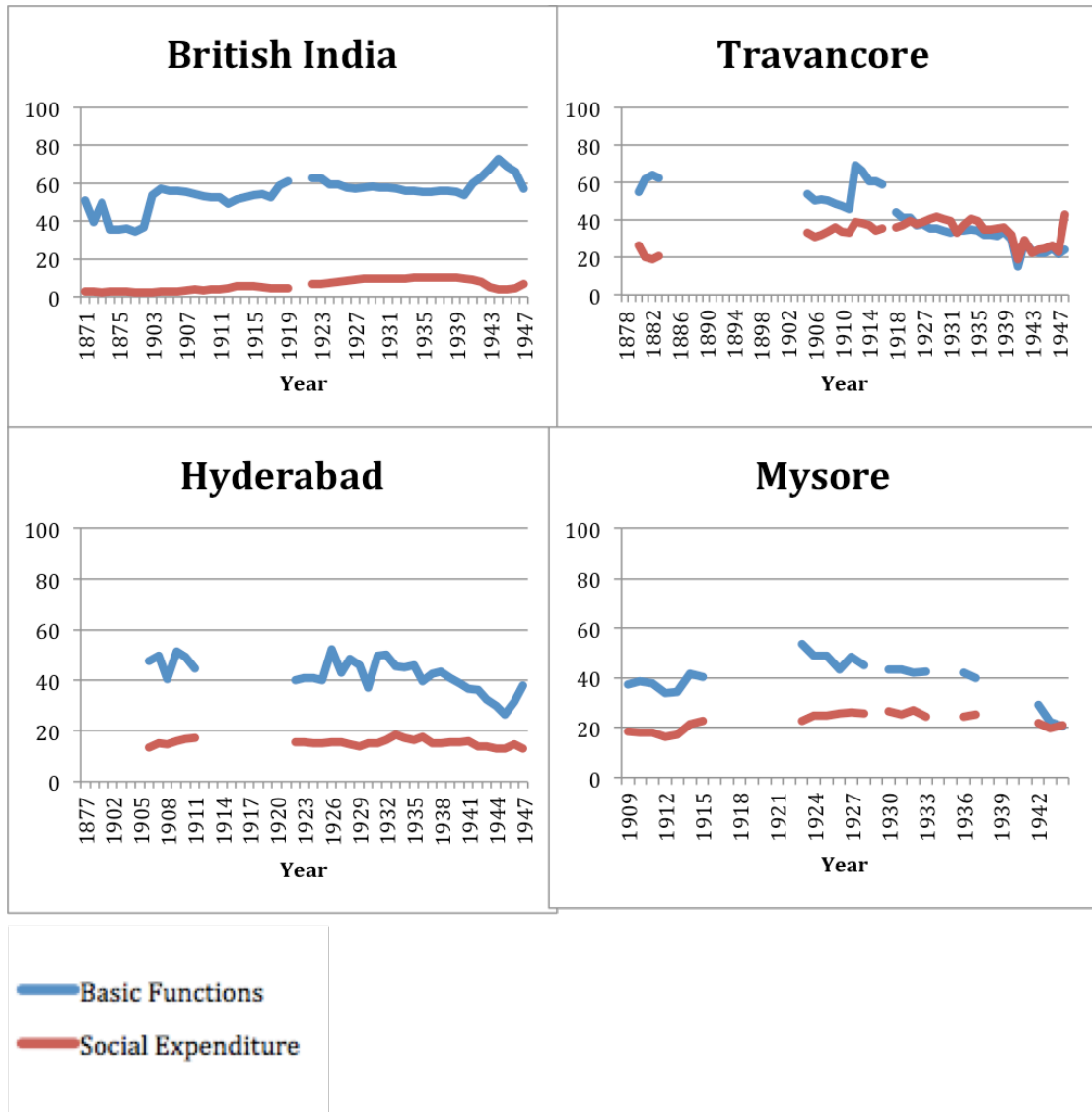
The mechanism of the well-known public investment in social capital in Travancore can now be better understood. The result of the quantitative analysis here indicates that it is not the case that Travancore invested more heavily in social capital because it was a high tax regime. Rather, the States social investments were achieved with similar levels of tax extraction as in British India.

Public Expenditure Priorities, Social Expenditure Versus Basic State Functions: Regional Comparison

This section summarizes the public expenditure patterns of British India and the States using two main categories. The first is 'basic functions' which is composed of public expenditure on administration (including the royal family for the States), security and defence (including the tribute for the States). The second is 'social expenditure' which is composed of public expenditure on health

and education. 'Social expenditure' and 'basic functions' do not sum to 100% of public expenditure. The excluded categories include capital infrastructure investment such as public buildings and roads and other miscellaneous departments. Where any one of the component categories comprising basic functions or social expenditure is missing, I have excluded all information for that year in that region. The data are presented in Figure 3.4 below.

Figure 3.4: Public Expenditure on Social Expenditure and Basic State Functions in Indian Regions 1871-1947



Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

Social expenditure was at most a secondary priority in British Indian public expenditure. This is one of the key differences between fiscal policy in British Indian and the States. The idea that administration and security (broadly defined) were the first priority in public expenditure was commonly expressed

by British officials in India to characterize their approach to fiscal policy. For example, the 1922 Central Provinces Retrenchment Committee Report states:

Obviously the first charge on the finances of the province is the public safety and the administration of the laws, and adequate provision must first be made for securing these objects...After making due provision for the performance of the essential functions of Government, the next consideration is what activities and developments the province is capable of undertaking with due regard to its finances and to the economic, political and social conditions of the people...¹⁴¹

In this statement not only do the basic functions get special status but they also get first priority on government revenues with other activities relating to the “economic...and social conditions of the people” standing further down in the queue. Ahmed, the nationalist economist, reacted differently to the phenomenon of prioritizing expenditure on ‘basic functions’:

A foreign Government, irresponsible to the people, discredited in the eyes of the masses and facing a countrywide discontent is obliged to keep intact and strengthen continually the system of force on which it is based. Thus the annual budgets allow the great bulk of the revenues to be absorbed by the so called “essential services” leaving a very small percentage of the total income to be spent on the nation building services such as Education, Public Health, Agriculture and Industry. The budgets in this respect expose most strikingly the reactionary and exploiting character of the present politico-economic system of the country. ...This illustrates how Imperialism safeguards its rule of the sword by keeping the people hungry, illiterate, diseased and poverty stricken¹⁴²

In the war period, Britain was keen to reassert its control over India both as an imperial asset and as a strategic base. This determination is reflected in the extreme form of public finance pursued where a huge proportion of public resources were spent on defence, law and order. This pattern became even more extreme during the Second World War.

Hyderabad too, had a limited view of the role of government in society. A contemporary official source describes the State’s approach to fiscal policy

¹⁴¹ Report of the Retrenchment Committee, Nagpur, Government Press, 1922, p12

¹⁴² IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938, p2

...the government continued to concentrate only on administrative modernization, not political modernization. The Nizam and his officials confined their goals to the efficient performance of minimal government functions: the collection of taxes, the maintenance of law and order, and the provision of limited public services (education, communication and transport facilities) 143.

Yet, Hyderabad spent slightly more on social expenditure than did British India.

In all three of the large States social expenditure was a higher budgetary priority than in British India. States had to shoulder the cost of maintaining a royal family, which even in the case of the modest Travancore royals cost around 5% of State revenues. Nevertheless, the States were able to dedicate a larger portion of their budgets to social expenditure. This was possible because of the States' much lower expenditure on security and defence. The anachronous system of States' defence finance via the tribute system shielded the Princes from the varying cost of defending India as part of the British Empire. Behind this screen, the large States were able to develop public finances that looked significantly more like the Western progressive countries than did British India

¹⁴³ Leonard, "Hyderabad: The Mulki-Non-Mulki Conflict" in Jeffrey (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p66

Chapter 4. Crisis and Conflict: 1938-1947 – The Challenge of Raising Revenues in Wartime

In the short period from 1938 to Indian independence in 1947 there were a wide-ranging set of public policy changes in both British India and in the States. One obvious reason for substantial changes was the outbreak of World War, which began to affect Indian public finances in earnest when the Japanese invaded neighbouring Burma in 1942 necessitating major military operations on India's frontier. To respond to the military threats to India and to the Empire, British India increased its defence expenditure dramatically.

Other important forces for change in British India in this period were the recently introduced 1935 constitutional reforms in British India, which, among other things, expanded the franchise, introduced popularly elected ministers in the provinces and increased Congress 's hopes of eventual independence. Unrest and organised non-cooperation were fairly common from 1938 in both British India and in the States. Observing the constitutional developments in British India, political groups in the States began to exert pressure for constitutional reform. As a result some modest constitutional changes were made in many States in 1939. The 1937 British Indian elections generated Congress led administrations in Madras, Bombay, C.P., U.P., Bihar, Orissa and the North West Frontier with sizeable Congress majorities in five of these and coalitions in the others. When India was brought into World War Two by a proclamation of the Viceroy, without any popular consultation, the Congress ministries in the Provinces resigned in protest. Thereafter, those Provinces where Congress governments had been elected were governed instead by their British

Governors. A corollary of the political turbulence in this period was increased expenditure on internal security forces such as police across many parts of India.

The pressures of war put the Indian economy under severe stress. Budget deficits widened and inflation picked up at the beginning of the war and then accelerated from 1942-43. This coincided with the Bengal famine in 1943-44 which some argue was partly caused by the inflation¹. Even where famine conditions did not obtain, the poor as well as those on fixed salaries struggled to cope with soaring food prices. The proportion of revenues derived from income taxes increased in many regions of India during the war, which shifted the burden of taxation away from regressive indirect taxes and towards more redistributive direct taxes. The Second World War also witnessed the growth of some of India's major industrial enterprises and business dynasties. For instance, the Birla group, still one of the premier industrial families of India today, expanded and entrenched its presence in Bombay manufacturing during the war. But for primary product exporters the war was something of a lottery. Those goods that were not a wartime priority struggled to access transport to reach distant markets, resulting in a collapse in demand. At the same time, certain goods that had key wartime uses experienced a boom. Travancore produced a narrow range of key primary goods, many of which were sold on international markets. Its rubber producers quickly secured orders for war supplies. However, other traditional products such as coir and pepper lost

¹ Sen, A., *Poverty and Famines: An Essay on Entitlement and Deprivation*, Oxford, Clarendon Press, 1981

access to international markets. This led to significant pockets of unemployment in the State in this period².

Scholars have debated at what point the withdrawal of the British from India became inevitable. Many point to the Second World War as the breaking point because of the immense strain placed on the Indian economy and the authoritarian wartime measures introduced. Others have argued that the end of British rule was inevitable from earlier in the twentieth century³. Either way, during the war few believed that India would remain governed by the British when hostilities ended. The Princes' futures too were uncertain. The majority of them had aligned themselves with the colonial regime and against indigenous democratic forces. In early 1942 Sir Stafford Cripps was sent to India on a mission to secure the colony's cooperation with the war effort. The mission was largely unsuccessful but in the course of his visit, Cripps had assured the Princes that they would not be forced to join an Indian run administration if and when the British left, instead having the power to choose whether or not to become part of the Indian Union. When the time came, however, the British were in no position to keep this promise as they speedily withdrew from the sub-continent. The experience of Hyderabad in 1947, which sought to preserve its autonomy and threatened independence from India, is one illustration of this.

This chapter considers the impact of war on the Indian tax system. The huge cost of total war prompted the British Indian government to pursue new sources of revenue such as direct revenues, with limited success. Because the tax

² IOR/V/10/2091, Travancore Administration Report 1940-41

³ Brown, J., *Modern India: The Origins of an Asian Democracy*, Oxford, Oxford University Press, 1994, p251

raising efforts had a limited impact, the British Indian government resorted to inflationary finance in the war years prompting rapidly increasing prices in 1943-4.

Direct Taxation: The Search for New Sources of Revenue

One response to the budgetary pressures experienced in India during the war was to investigate new sources of public revenue. The area many Indian administrators looked focused on for new sources of revenue was direct taxation. In Western countries in the nineteenth century administrative costs of tax collection declined as the tax base shifted towards direct taxes. Direct taxes such as income taxes and taxes on wealth tended to be cheaper to collect than indirect taxes like customs and excise⁴. They could also be crafted to be progressive unlike the inherently regressive consumption taxes.

From the nineteenth century up to World War Two the British Indian authorities generally regarded income tax as a last resort. It was common for income tax rates to be increased in times of fiscal crisis, only to be reduced again as soon as conditions improved. There was little official enthusiasm for redistribution from the rich to the poor via progressive taxation. Rather, income taxes were imposed for revenue purposes. The income tax was first introduced in India in 1860 when the British Indian finances were in disarray after the expense of combatting the rebellion. It was quickly removed and was not reintroduced again until 1876. In his study of the Indian tax system Ambirajan describes late nineteenth century attitudes to the income tax in India:

⁴ Lindert, P., *Growing Public: Social Spending and Economic Growth since the Eighteenth Century* (2vols., Cambridge: Cambridge University Press, 2004), Volume 1, p302-3

Just as the customs duty was anathema to the Lancashire manufacturers, income tax was heartily disliked...by the more literate sections of society, the zemindars [sic] and other aristocrats, members of the civil service and the non-official British community in India.⁵

In the early 1930s the income tax and the surtax were increased in British India in response to the impact of the depression on public finances. However they were reduced as soon as the pressures on the British Indian budget eased⁶. As late as 1940, the British Indian authorities were still keen to point out that the income tax was only to be raised after all other options had been exhausted. The finance member said in his budget speech for 1941 "The constitution, ... permits, its [income tax] imposition only after all other practicable means of balancing the budget have been explored."⁷

In Travancore there was an extensive debate on the appropriate role of redistribution in the tax system in the decades before the Second World War. One member of the legislative council argued in 1927 for a more progressive tax system:

...let the principle of taxation be such as to level down the rich man to the level of the poor man. Let the incidence of taxation be equitably and fairly distributed. We have got to collect as much money as we could possibly collect and make use of that money for it to reach the poor man.⁸

An illustrative statement from the legislative debates in the 1930s urged for changes in the burden of taxation to reduce the tax incidence on the poor. "... Taking the whole scheme of taxation, we find that the share of the burden of the

⁵ Ambirajan, *Classical Political Economy and British Policy in India*, Cambridge University Press, Cambridge, 1978, p210

⁶ The finance member explained the fiscal priorities for 1935-36 in the following terms: "Government have recognized that after the removal of the pay cut [for the armed services] the first relief to be afforded is the removal of the surcharge on the income tax and super tax. The removal of the whole of the surcharges on the super tax and income tax would cost 334 lakhs in a year, and the removal of the tax on smaller incomes below Rs 2000 a year would cost another 75 lakhs.", IOR/V/16/397, Budget for 1935-36

⁷ IOR/V/16/412, Budget for 1940-41

⁸ Mr A K Pillai, Budget Discussion, Legislative Council Proceedings 1927, Government of Travancore, Kerala State Archives

poor is relatively much heavier than that of the middle and upper classes. ...”⁹. In 1937-38 Travancore increased the rates of income tax for those with the highest incomes and also the rate of super tax on commercial profits¹⁰. The income tax in Travancore was increased again in 1940¹¹. These reforms increased the proportion of Travancore’s revenues coming from direct taxation as well as making the Travancore income tax more progressive.

Some other British colonies also introduced new direct taxes in the inter-war period. In African colonies in the early twentieth century there was an attempt to increase the proportion of revenue collected from direct taxes, however, this strategy was hampered by the weakness of the colonial tax administration¹². Facing a budget deficit, the Kenyan authorities introduced an income tax in 1920 but it was abandoned the next year as European settlers organized a vocal campaign against it, on the grounds that it would disproportionately affect Europeans¹³. A more successful income tax was introduced in Northern Rhodesia, which mainly targeted commercial enterprises rather than with individuals. In this colony the proportion of revenue generated by the income tax gradually increased in the 1920s and 1930s, becoming the single largest source of revenue¹⁴. Within South Asia, Ceylon introduced an income tax in 1932, after the introduction of the franchise

⁹ Mr M N Paramesvaran Pillai, Proceedings of the Travancore Sri Chirra State Council, Vol.1, Superintendent Government Press 1934, Presentation of the Budget for 1933-1934 in July 1933. Government of Travancore, Kerala State Archives

¹⁰ IOR/V/10/2088, Travancore Administration Report, 1937-38

¹¹ Travancore Administration Report 1940 to 1941, Government of India, British Library, IOR/V/2091

¹² Gardner, L., *Taxing Colonial Africa: The Political Economy of British Imperialism*, Oxford University Press, 2012. p95

¹³ Gardner, L., *Taxing Colonial Africa: The Political Economy of British Imperialism*, Oxford University Press, 2012. p99

¹⁴ Gardner, L., *Taxing Colonial Africa: The Political Economy of British Imperialism*, Oxford University Press, 2012, p102

in the territory in 1931¹⁵. Despite these trends in other colonies, in India before World War Two no tax regime derived more than ten percent of revenues from direct taxation as shown in Figure 4.1 below. The limited role of direct taxation in the fiscal system attracted nationalist criticism in the 1930s. Several nationalist commentators criticized the British Indian tax system's lack of progressivity. In 1938 Ahmed, the nationalist economist, noted critically that "Progressive direct taxation plays a very minor role in the Indian financial system."¹⁶ Another nationalist commentator on colonial public finance in 1931 criticized the absence of a consistent income tax policy in British India:

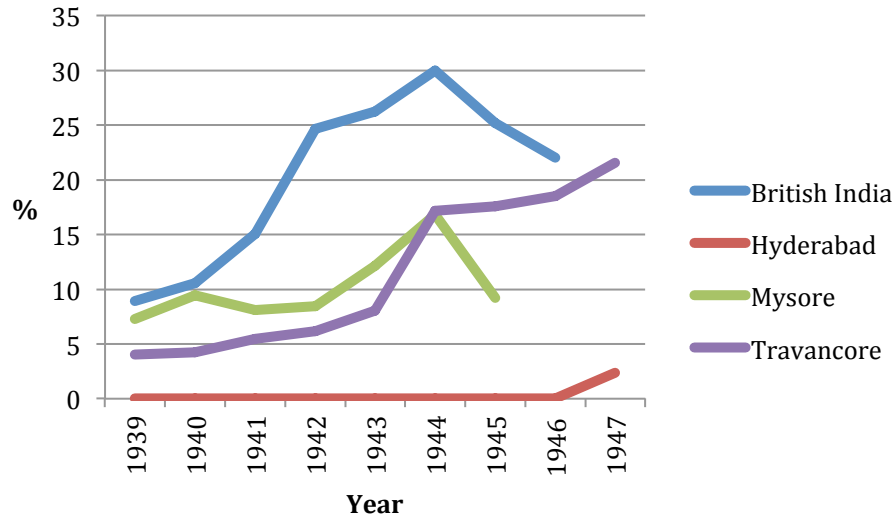
At no time in the history of the Indian income tax has any attempt been made by Government to examine the fundamental principles underlying its levy or to analyse its incidence...In other words, in regard to the Indian income tax, Government has followed a policy of drift, allowing the system to be altered according to the needs and circumstances of the moment.¹⁷

¹⁵ Jones, *Health Policy in Britain's Model Colony: Ceylon 1900-1948*, Orient Longman, New Delhi, 2004, p33

¹⁶ IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938, p19

¹⁷ Vakil (ed), Rao, *Taxation of Income in India*, Longmans, Mangalore, 1931, p269

Figure 4.1: Percentage of public revenue from direct taxes, 1939-1947



Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

It was during the Second World War that there was a significant change in the tax base in British India and in some of the large Princely States. Some Indian regions began shifting their tax base towards direct taxation, especially income tax. This trend has been unearthed through analysis of the public accounts data from the three large Princely States. The direct taxation trends have been calculated from the sum of the income tax and the super tax levied on individuals and businesses during the war. The results are represented in Figure 4.1 above, which gives a regional breakdown of trends. The general pattern was that British India had a more developed tax system than even the largest States, quickly moving to increase direct taxation in the early years of the war. Among the three large States of Mysore, Travancore and Hyderabad, Mysore began with direct taxation at a similar level to British India, but failed to keep pace with

directly ruled India in the war years. It was Travancore which accelerated and had the highest proportion of direct tax revenue of the three States, converging with the British Indian level by the mid 1940s.

During the Second World War income tax became a more important source of revenue in British India despite continued official resistance to it. The rates of income tax in British India were increased at the beginning of the Second World War, in 1939. The government anticipated a budget deficit in the following year but decided not to increase the income tax rates again in 1940

... it is only a year since the incidence of income-tax over the higher ranges of income was considerably enhanced. For the present, therefore, this avenue has been abandoned until more pressing needs compel resort to it.¹⁸

Instead, in 1940 the government decided to increase the excise duty on sugar and motor spirit.¹⁹ The financial secretary acknowledged the “regressive character” of indirect taxation of this type but justified the policy on the grounds that:

Neither of these articles [sugar and motor spirit] enters into the normal consumption of the poorest classes, and therefore, as additional revenue had to be raised, our proposals may not unreasonably be regarded as the least burdensome method of securing it that can be devised.²⁰

The following year, budget deficits in British India continued. The government was again compelled by urgent fiscal necessity to raise the rates of the income tax and super tax in addition to increasing the excess profits tax.²¹ Alongside these increases in direct taxation, the 1941 budget also raised indirect taxes including excise on matches²². Though the basic rate of the super tax remained

¹⁸ IOR/V/16/412, Budget for 1940-41

¹⁹ IOR/V/16/412, Budget for 1940-41

²⁰ IOR/V/16/412, Budget for 1940-41

²¹ IOR/V/16/416, Budget for 1941-42

²² IOR/V/16/416, Budget for 1941-42

unchanged in British India for most of the war, super tax surcharges were periodically increased to help reduce the deficit.²³ In addition, the tax-free limit on income tax was reduced in the financial years 1942-43 and 1943-44 from Rs 2,000 to Rs 1,500.²⁴

The distribution of income tax revenue between the centre and the provinces was changed in 1940 to give more of this growing source of revenue to the central government to help finance the war. Under the original distribution all increases in revenues from the income tax would accrue to the provincial governments. Under the 1940 amendment, the increases in this source of revenue would be shared equally between the central and provincial governments. The Finance Member described the motivation for this change in his 1940 budget speech:

The object of the [1940] amendment [to the distribution of income tax revenues] was to enable the Centre, which has to meet considerable extra expenditure both civil and military in connection with the war, to secure due share of any improvement in income-tax ... arising largely out of war-time conditions. The full benefit of the improvement under ...[this] head would, under the original arrangements, have accrued entirely to the Provinces whose extra expenditure on account of the war is relatively slight, which would have been anomalous in the extreme.²⁵

It will be remembered that the Provinces' public expenditure responsibilities were the 'nation building' areas such as education and health. The government was eager to demonstrate that the Provinces were not experiencing any hardship as a result of allocating them a lower proportion of income tax receipts "... the revised formula, while securing the main object for which it was devised, [of giving the centre a larger proportion of income tax

²³ Jain, *Taxation of Income in India: An Empirical Study Since 1939*, Macmillan, Delhi, 1975, p34-5

²⁴ Jain, *Taxation of Income in India: An Empirical Study Since 1939*, Macmillan, Delhi, 1975, p143

²⁵ IOR/V/16/412, Budget for 1940-41

revenue] has not operated unfairly to the interest of the Provinces.”²⁶ The diversion of income tax revenues away from the Provinces and towards the Centre is an illustration of the priority given to defence expenditure over social expenditure in this period²⁷.

There were many parts of indirectly ruled India which failed to keep up with the trend towards direct taxation in the war years. In Hyderabad, for example, direct taxes never comprised a large proportion of tax revenue, though Hyderabadi officials regretted this in the mid 1940s. In Hyderabad, the officials showed a greater interest in the progressivity of the tax system in the 1940s though they made few changes to their indirect-tax-heavy revenues. An official publication referring to taxation in the State in the mid twentieth century describes the official intention during the war of increasing the burden of taxation on higher income groups and reducing the burden on the poor. In addition, it was recognized at the time that Hyderabad’s tax system was more regressive than that of other South Indian states:

A comparison of the sources of income of other States with those of Hyderabad would reveal that Hyderabad has still to adjust her system in conformity to the distribution of fiscal burden among the different classes. The tax burden on the poor classes ...is fairly high relative to their income, as these classes have to bear the burden of excise duties, customs duties, and land revenue in the case of farmers. In the middle classes certain sections are lightly taxed e.g. the traders and landlords. In the upper section, the substantial land-holding classes escape lightly including the professional classes, merchants and industrialists. This whole income group is lightly taxed in comparison with similar income groups in the adjacent States.²⁸

During the war, despite the many increases in direct taxes described above, the demands on the British Indian budget exceeded its ability to raise taxes from either existing or new taxes. The government turned to budget

²⁶ IOR/V/16/412, Budget for 1940-41

²⁷ For more on defence expenditure see Chapter 5 below

²⁸ *A Review of Hyderabad Finance*, Government Press Hyderabad, 1951, p292

deficits and expanding the money supply. This important issue is examined in greater detail below.

Administrative Sophistication and Tax Collection

Wartime British India struggled to implement the new types of direct taxation introduced in this turbulent period. Throughout the conflict there were complaints that taxes were not collected consistently or efficiently. The problems of introducing extensive tax reform were compounded by the profound administrative overstretch of the British Indian bureaucracy.

There were significant problems in the administration of income tax during the war due to the destruction of some of their records during 'disturbances' in 1942, also "inadequacy in the quality of some of the existing executive staff". To deal with the later problem – in October 1944, 40 new positions were added in the Income tax field.²⁹

The History of the Reserve Bank of India commented, "...the inadequacy of the administrative machinery for collecting taxes ...limited Government's ability to achieve any spectacular results in tax raising."³⁰

One indication of the difference in sophistication of the taxation systems across India is given by a 1948-49 report on the States' fiscal systems. This was written when the newly independent Indian government was grappling with harmonizing the country's fiscal system. In many States income taxes were at a lower level than that of British India or not imposed at all. As a result, at

²⁹ IOR/V/16/490, Proceedings of the Standing Finance Committee 1942-1947

³⁰ Reserve Bank of India, *History of the Reserve Bank of India Volume 1*, Online at <http://www.rbi.org.in/scripts/RHvol-1.aspx> p289

independence, the standardisation of income tax across the Indian union was graduated so that the position in many of the States could adjust slowly³¹.

The newly independent administration had few personnel trained in income tax procedures because so few parts of the country had a history of raising significant revenues from direct taxation. However, the States of Cochin, Travancore and Mysore, were an exception. They provided a valuable reservoir of expertise in fiscal administration for the new national government:

It is in regard to income-tax that special arrangements will be needed for the training of administrative personnel. In Cochin, Travancore and Mysore where income tax is already levied and in which there is a well-organised public service, competent staffs are available who can be taken over by the centre.³²

Other States, however, needed special attention to develop their administrative capacity to implement income taxes:

For States in which no income-tax is levied or the tax has only recently been introduced, special arrangements must be made at one to recruit and train staffs. Such areas are Hyderabad, the Saurashtra Union, the Madhya Bharat Union, the United State of Rajasthan, the Vindhya Pradesh Union and the Patiala and East Punjab States Union.³³

The report recommended that income tax be introduced across India including in the regions, which did not have an income tax at the time of independence. For those regions where income tax was to be introduced for the first time, the report suggested that the level be set according to local conditions and slowly adjusted to the national rate over a period of five years. Those Princely States with a history of direct taxation during the late colonial period,

³¹ Report of the Indian States Finances Enquiry Committee 1948-49, Part 1, Government of India

³² Report of the Indian States Finances Enquiry Committee 1948-49, Part 1, Government of India, p27

³³ Report of the Indian States Finances Enquiry Committee 1948-49, Part 1, Government of India, p27

such as Travancore and Mysore, had a head start in administrative capacity, compared with other States like Hyderabad, at the time of independence.

Budget Deficits During the Second World War

The clearest illustration of the strain that war put on the British Indian public finances is the budgetary balance. Recoverable war expenditure 1939-1945 amounted to Rs 1,736 crores. Over the war period, the government of India had to finance a total government expenditure of around Rs 4,000 crores. The budgetary balance of British India shifted into a large deficit in all the years of World War Two but one. The States, however, experienced either small deficits or even surpluses in during the war.

Table 4.1: Budget Balance in Indian Regions 1900-1945

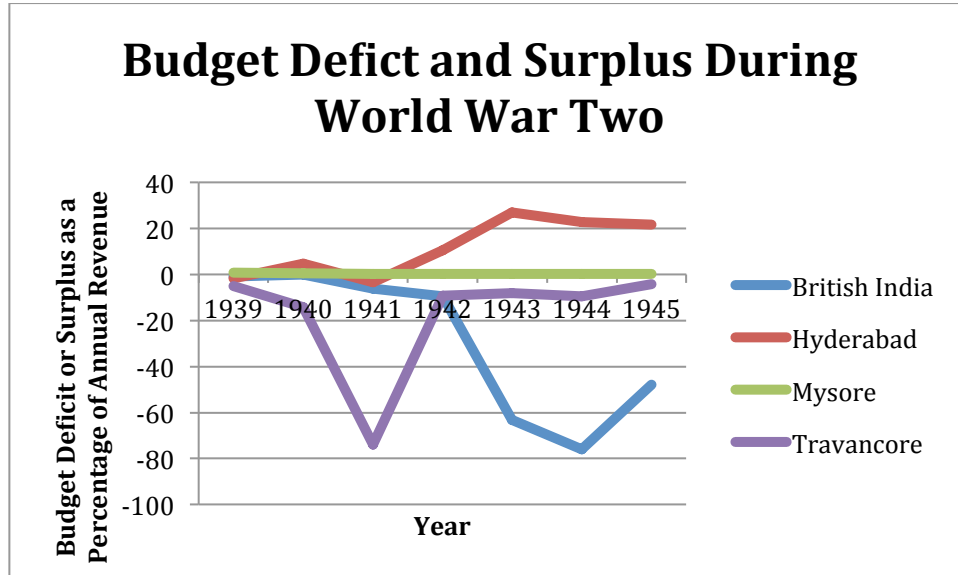
Mean Revenue Account Surplus or Deficit	Surplus – Deficit in British India and the Large States, Rs			
	British India, Rs	Travancore, Rs	Mysore, Rs	Hyderabad, OS (local currency)
1900-1913	33033333	507735	282887	6314943
1914-1919	27100000	2683865	4103000	4762559
1920-1924	-179840000	-208720	40811	7567000
1925-1929	17380000	2352022	-146892	11373000
1930-1934	-43040000	-74810	-2629093	-5098600
1935-1939	-4120000	-1715023	320942	2479600
1939-1945	-688714286	-5645896	226578	20666857

Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

Table 4.1 above shows that of the States, only Travancore had a deficit on average over the war years. Both Mysore and Hyderabad had surpluses. The table also demonstrates Hyderabad's commitment to budget surpluses from the

beginning of the twentieth century up to the Second World War, with the brief exception of the post Depression period.

Figure 4.2: Budget Deficit and Surplus in World War Two



Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

The above Figure 4.2 shows the size of the budget deficits and surpluses in each of the regions as a proportion of public revenue. While both British India and Travancore had budget deficits during the war Travancore's was much lower both as an absolute figure and as a percentage of annual revenue in all years but 1941. Mysore did not have a budget deficit in any of the war years.

Inflationary Finance

India experienced dramatic inflation during World War Two, which affected both the directly and indirectly ruled regions of India. The official history of the Reserve Bank of India links the inflation with British India's

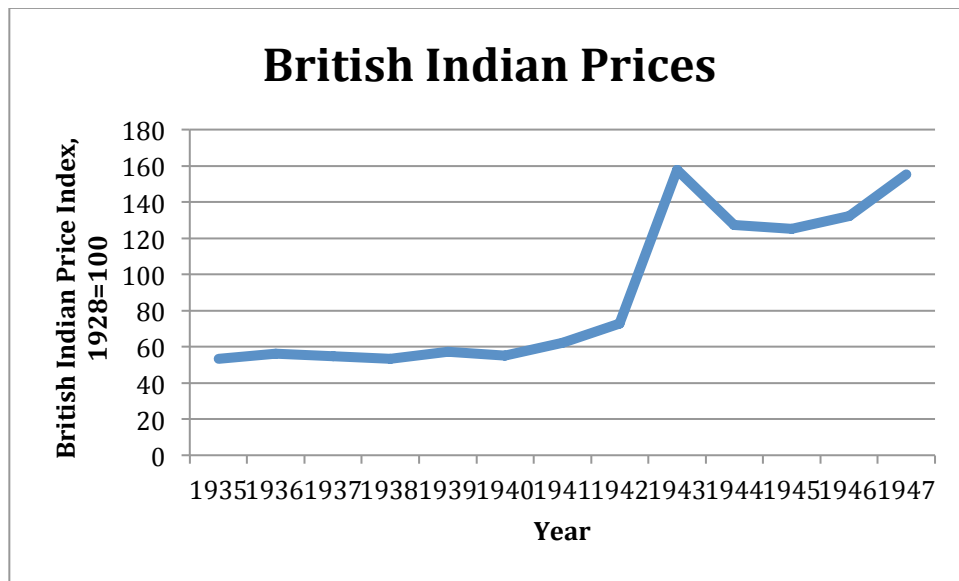
wartime fiscal woes. The problem of taxation is described in terms of severe “limitations on the ability of the British rulers in India to maximize the mobilization of resources [during the war] in a non-inflationary way.”³⁴. Unable to meet increased expenditure with tax revenues, the British Indian government ran large deficits and rapidly increased the money supply³⁵. The result was rapid inflation, as shown in the price data in Figure 4.3 below.

³⁴ Reserve Bank of India, *History of the Reserve Bank of India Volume 1*, Online at <http://www.rbi.org.in/scripts/RHvol-1.aspx>, p283

³⁵ There is a growing literature on the use of inflation as a method of public finance during World War Two. Some of the most interesting studies explore inflationary finance in colonized and occupied territories. For instance Occhino et al. find that a significant proportion of French GDP, as much as 50% in 1943, was transferred to Germany in during the Second World War. This was effected with fixing exchange rates to Germany’s advantage, forced labour, increasing national debt and inflation. See Occhino, F., Oosterlink, K., and White, E., ‘How Occupied France Financed Its Own Exploitation in World War II’, *American Economic Review*, Vol.97 (No. 2, 2007), 295-299. In Asia, Huff and Majima explore a similar set of issues in occupied South East Asia. See Huff, G., and Majima, S., ‘Financing Japan’s World War II Occupation of Southeast Asia’, *Journal of Economic History*, Vol. 73 (No.4, 2013), 937-977. In this article they find that the Japanese occupation of these areas was largely financed by printing money and by inflationary finance. Both of these episodes occurred in the contexts of colonized or occupied territories. The authors of the papers cited above show how occupying powers exploited the economies of subject nations for their own expansionist and military interests.

At an early stage in my research I explored the possibility of investigating the use of inflation in Second World India as a form of exploitative finance. Many features of the Indian experience are similar to those of occupied France and South East Asia. All these regions experienced a significant expansion in the money supply, inflation and military expenditure while under foreign rule. After exploring the available primary resources it was difficult to assemble the various types of quantitative material for India to make an assessment of the sorts cited above. So I turned to other areas of research. However, India, along with many other British colonies experienced significant inflation during the war, far in excess of that seen in the UK. The colonial approach to wartime inflation in India, Egypt and elsewhere could be a productive area of research for future scholars.

Figure 4.3: Prices in British India



Source: Adapted from McAlpin, M., 'Price Movements and Fluctuations in Economic Activity 1860-1947', in D. Kumar (ed.) *Cambridge Economic History of India* (2vols., Cambridge: Cambridge University Press, 1983), Data Appendix.

The inflation was mostly felt in the short period between 1942 and 1944. During that time government revenues in most parts of British and Princely India declined in real terms because the tax systems were not structured to keep pace with inflation. For instance, between 1942 and 1943 real per capita revenues in British India declined by 42% compared with 28% in Travancore. Although governments across the sub-continent were aware of the problem of inflation and many complained of the impact on the cost of living for their citizens I have seen no evidence that administrators were aware that the real value of government revenue was declining as a result of inflation. This means it is likely that the sudden changes in many sections of government budgets in this period were unintended rather than planned. This may imply that there was high degree nominal stickiness in government budgets in this period, which exacerbated the impact of the high wartime inflation.

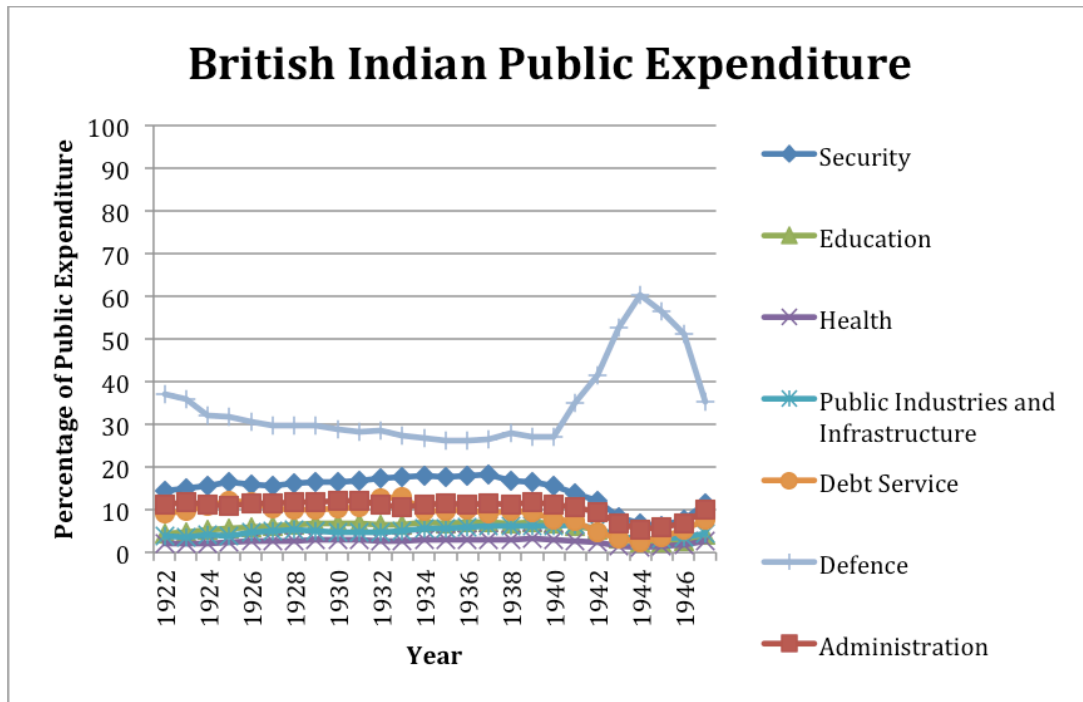
Chapter 5. Public Expenditure 1938-1947: Defence, Security and Food

During the Second World War, defence and security came to dominate British Indian public expenditure to a greater extent than at any other point in the first half of the twentieth century. The story of defence and security expenditure in the same period in the States is more complex and described in detail in the sections below. The economic dislocation of the war period led to inflation and food shortages. The most extreme expression of these processes was the 1943-44 Bengal famine. In British India there were only minimal efforts to provide comprehensive rationing and food entitlements to its citizens. Some of the States were more ambitious in this area, notably Travancore. This South Indian state not only had rationing during the war but also instituted an extensive system of food subsidies in the immediate post-war period. These issues of defence, security and food expenditure by Indian governments are explored in this chapter.

Defence Expenditure

Figure 5.1 below demonstrates the extent to which defence expenditure during World War Two dominated all other forms of expenditure in British India.

Figure 5.1: Composition of Public Expenditure in British India 1922-1946



Sources: The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

British Indian defence expenditure was a controversial issue in both Britain and India from the late nineteenth century until independence. In his 1946 book, *The Discovery of India*, Nehru summarises nationalist criticism of the British approach to Indian defence finance in the nineteenth and twentieth centuries.

India had to bear the cost of her own conquest, and then of her transfer... from the East India Company to the British Crown, for the extension of the British Empire to Burma and elsewhere, for expeditions to Africa, Persia etc. and for her defence against Indians themselves. She was not only used as a base for imperial purposes, without any reimbursement for this, but she had further to pay for the training of part of the British army in England 'capitation' charges these were called. Indeed India was charged for all manner of other expenses incurred by Britain, such as the maintenance of British diplomatic and consular establishments in China and Persia, the entire cost of the telegraph line from England to India, part of the expenses of the British Mediterranean fleet and even the receptions given to the Sultan of Turkey in London.³⁶

³⁶ Nehru, J., *The Discovery of India*, Oxford University Press, Delhi, 1946, p305

The Second World War in particular saw extensive discussions over the amount India spent on defence. In the inter-war period, a combination of financial and political pressures forced a reluctant British Indian administration to reduce defence expenditure. However, during World War Two, defence spending soared again reaching 60% of total public expenditure in 1944.

The most important source of finance for the defence of India came from the British Indian budget with additional contributions from the States via their tribute payments. Throughout the colonial period military expenditure was by far the largest single item of public expenditure in British India. Defence and security combined dwarfed all the other forms of public expenditure in directly ruled India³⁷. The proportion of the budget spent on defence in late colonial British India was much higher than most other countries and dependent colonies in the same period. For instance in 1931 military expenditure formed 3% of the budget in New Zealand, 8% in Mauritius and 26% in the Federated Malay States while for British India it was 32%³⁸. In British Africa defence formed 6% of expenditure in the same year³⁹. It was during World War Two however, that British Indian defence expenditure exploded, soaring to 60% of public expenditure. This provoked sharp nationalist complaints of colonial exploitation. Nevertheless, British politicians including Churchill argued that India was not contributing enough. During the war the massive expansion of

³⁷ This has been recognized by various economic historians of the period such as Kumar

³⁸ Booth, 'Night Watchman, Extractive, or Developmental States? Some Evidence from Late Colonial South-East Asia', *Economic History Review*, Vol.60, No.2, p252 and Frankema, 'Colonial Taxation and Government Spending in British Africa, 1880-1940: Maximising Revenue or Minimising Effort?', *Explorations in Economic History*, Vol.48, 2011, p142

³⁹ Author's calculations. In her book on Colonial African budgets, Gardner argues that London often subsidized military actions in Africa for fear that raising taxes would lead to rebellion. Gardner, L., *Taxing Colonial Africa: The Political Economy of British Imperialism*, Oxford University Press, 2012, p54

defence expenditure contributed to a surge in aggregate demand and inflation. This expansion of defence expenditure was a key feature of the Indian macroeconomy in this period. The trend in military expenditure in the Princely States during the war has not been directly addressed in the literature to date. This section will compare the defence expenditure in British India and the Princely States in the late colonial period focusing on World War Two.

The main sources of controversy over financing Indian defence were, first, the overall size of defence spending. The second point of controversy was the distribution of defence costs between Britain and India. The financial burden to India of assisting in major military campaigns like the First and Second World Wars and the Afghan wars was larger than her domestic resources could support. She accumulated large debts, which then made it difficult to balance the Indian budget for significant periods following the conflicts. The issue that advocates for India raised increasingly vocally was whether these conflicts were, truly in India's interest or whether they were in Britain's Imperial interest and so should be financed by Britain. The Indian armed forces were put to various Imperial uses throughout the period, often in places as distant from India as China and South Africa⁴⁰.

From the late nineteenth century there was a recognition from even conservative British officials that India bore a significant proportion of burden of Imperial defence.

⁴⁰ Overseas campaigns using Indian troops included Persia 1856-7, China 1857-60, the Boxer Rebellion 1900, the Abyssinian campaign 1864, the Afghan War 1878-80, Egypt 1882-5, sub-Saharan Africa 1897-8 the Boer War 1902-4 and the invasion of Tibet 1903-4. During the First World War the Indian army served extensively in Mesopotamia and in France. Davis, L. and Huttenback, R., *Mammon and the Pursuit of Empire: The Political Economy of British Imperialism 1860-1912*, (New York: Cambridge University Press, 1986), p154

The Government of India has never concealed its opinion that in apportioning the charges which have to be shared between the two countries, and when the interests of both English and India taxpayers have been at stake, India has sometimes received a scant measure of justice.⁴¹

Brown, the notable historian of India, comments of this period that because of the large military expenditure 'finance and external security were inextricable.'⁴² This comment is applicable to almost the whole period of colonial rule in India. In the twentieth century and in the lead up to the Second World War the question was increasingly being raised by Indian nationalists to what extent Britain was continuing to use India as "an English barrack in the Oriental seas", in Lord Salisbury's memorable phrase of 1882, "from which we may draw any number of troops without paying for them"⁴³.

British Indian Defence Expenditure 1857-1938

The scale and cost of the Indian army was in part a legacy of the 1857 mutiny-rebellion. The experience traumatized the British and in its wake the proportion of British troops in the Indian army was increased to a ratio of roughly one British soldier to every two Indian in response to the heightened sense of mistrust of the native population⁴⁴. This had the effect of greatly increasing the costs of the Indian army since British troops were paid two or three times the salary of Indian troops. In the late nineteenth century, the period of competition for influence in central Asia between Britain and Russia, also

⁴¹ Strachey and Strachey, *The Finances and Public Works of India*, London, 1882, p50

⁴² Brown, J., *Modern India: The Origins of an Asian Democracy*, Oxford, Oxford University Press, 1994, p133

⁴³ Cited in Jeffry, R., "'An English Barrack in the Oriental Seas'? India in the Aftermath of the First World War", *Modern Asian Studies*, Vol.15, No.3, 1981, p369

⁴⁴ Another long last effect of the rebellion was a shift in the types of recruits in the British Indian army. The proportion was shifted towards the 'martial races' of Muslims and Sikhs who had developed a reputation for loyalty during the rebellion

known as the 'Great Game', was in full swing⁴⁵. This was fuelled, on the British side, by a section of elite and influential Russophobes who feared that the prime threat to Britain's possessions in India was Russia's growing presence in Central Asia. This anxiety motivated Britain's policy of surrounding India's borders with buffer States, such as Afghanistan and Nepal, against Russian influence. Securing India against this perceived threat was the main motivation for Kitchener's large-scale reform and expansion of the Indian army when he served as Commander in Chief from 1902 to 1909⁴⁶. The perceived Russian threat receded only slightly after the 1907 Anglo-Russian pact, which established spheres of influence in central Asia and the old anxiety resurfaced after the Bolshevik revolution in 1917. An apt conclusion on this episode by a scholar of the period is that: "It is apparent now that the lasting hostility between Britain and Russia was based on a quite unreal fear in each of the other's supposed aggressive intentions"⁴⁷.

After the turn of the century, when Congress was more organized and vocal, it was increasingly difficult for the British to ignore Indian claims that the defence budget was bloated. After the First World War, during which India contributed so much in funds and men, ignoring those claims became impossible. The Indian military contribution during the First World War was huge with 1,200,000 Indians serving in the colonial army as well a cash donation

⁴⁵ The British attitude to the Great Game is evocatively depicted in Kipling's 1900 novel, *Kim*.

⁴⁶ Jeffrey, " 'An English Barrack in the Oriental Seas'? India in the Aftermath of the First World War", *Modern Asian Studies*, Vol.15, No.3, 1981, p369

⁴⁷ G.D. Clayton, *Britain and the Eastern Question: Missolonghi to Gallipolo*, London, University of London Press, 1971, p126

£ 100 million from Indian coffers for the war effort⁴⁸. In the 1919 Government of India Act, India won the concession from the British Government that the Indian army would only be used on campaigns that were in India's interest.

In the 1920s the hang over of military expenditure from World War One continued to impede India's efforts to balance her budget as she struggled under a large burden of debt. In 1920 the recommendations of the Esher Committee that the Indian Army should be more fully incorporated into an Imperial defence force was strongly criticized in India and eventually the Committee's recommendations were abandoned. In 1921-2 the Indian general tariff was increased from 11 to 15% and, to the chagrin of the Indian Legislative Assembly, the additional revenue generated was dedicated to expanding defence expenditure. After continuing budget deficits in the early 1920s the 1923 Retrenchment Committee assessed India's finances and concluded that defence expenditure would have to be reduced. The view of the 1923 Retrenchment Committee (also known as the Inchcape Committee after its chairman) was that India was taxed to the limit and the level of taxation was so high it was on the cusp of provoking internal unrest. It argued that the combined policy of reducing expenditure on the army and reducing taxation would help to balance the budget without putting the security of India at risk. Lord Inchcape commented that "it will be a great misfortune, almost a disaster, to impose on India a larger military expenditure than that which those who are responsible for the safety of the country consider necessary"⁴⁹. The measures of the Inchcape Committee were loudly criticized by members of the House of Lords who

⁴⁸ Jeffry, " 'An English Barrack in the Oriental Seas'? India in the Aftermath of the First World War", *Modern Asian Studies*, Vol.15, No.3, 1981, p374

⁴⁹ 27th June, 1923, HoL, (636)

wanted Britain to be free to use a large Indian army to meet the “general needs of the Empire”⁵⁰.

In British India the proportion of expenditure on defence gradually declined in the interwar period from 38% of public expenditure in 1922 to 28% in 1939⁵¹. In 1927 the Indian legislative Assembly rejected the Indian Government’s proposals for military expenditure. The then Secretary of State for India, Lord Birkenhead, the Tory unionist, strongly denied that the army in India was too large or that it was being used as an ‘Imperial reserve force’⁵². However, at the time of his speech in the House of Lords, Indian troops were being used in Imperial missions in China. In 1933 the Garran Tribunal concluded that Britain should contribute an annual sum to India for the services provided by Indian military forces. The amount was decided by negotiations between the British and Indian governments and a figure of 1.5 million sterling annually was settled on.

As the British and Indian negotiators assessed and reassessed the distribution of defence expenditure between the colony and the metropole in the early twentieth century, India continued to experience significant demands on her military resources. After a period of quiet in the 1920s, the tribes along the North West Frontier took part in an increasing number of armed raids and riots in the 1930s. In particular the Wazir uprising of 1936 occupied the Indian administration’s attention since it occurred in the traditional source of Imperial

⁵⁰ 27th June 1923, House of Lords, Strength of the Indian Army (The Earl of Midelton, Tory and Irish Unionist) (620)

⁵¹ Author’s calculations from British Indian budget records

⁵² HL Deb 30 March 1927, vol 66, cols 869

anxiety, close to the border with Afghanistan⁵³. The area remained unsettled for most of the final colonial years attracting valuable troops and military resources into the Second World War⁵⁴.

In 1938 the Chatfield Committee concluded that India did indeed have a role in Imperial defence. However, it also proposed that Britain would pay for the modernization of India's armed forces in the move towards rearmament in the lead up to war. In 1938 the British War Office's contribution to the cost of Indian defence increased from £1.5 million to £2 million to help with the cost of army modernization in addition to another £8 million for modernization of the other Indian armed forces. In return, India agreed to allow four battalions of Indian troops to be taken outside of India⁵⁵.

Leake argues that it was the impending crisis of large-scale war that precipitated a financial compromise between India and Britain on Indian defence. However, the 1938 report did not bring an end to controversy on the issue, in fact discontent over the distribution of defence costs between Britain

⁵³ The border regions of British India, especially the highly sensitive North West Frontier region bordering with Afghanistan and close to Russia, were managed under a more extreme set of pressures, military, political and financial. This province was highly militarized Waziristan alone having 35,000 troops in 1937 and as a result it was almost always a deficit province. Size of deficit in Tripodi Edge of Empire. There were serious uprisings in Waziristan in 1936-37 which prompted the Tribal Defence and Control Committee to argue for a more generous fiscal policy in the region including building roads, schools and hospitals to bring the local population on side. However this suggestion was rejected by Samuel Hoare, the Secretary of State for India on the grounds of the "deterioration of the financial situation". Up to the end of the colonial period, very little money was spent on public services in the North West Frontier outside of the military. For instance, in 1946-47 the education budget for tribal area as a whole was 17,000 rupees, a tiny fraction of the money transferred to just one individual tribe. See Tripodi, 'Peacemaking Through Bribes or Cultural Empathy? The Political Officer and Britain's Strategy Towards the North-West Frontier, 1901-1945', *Journal of Strategic Studies*, Vol.31, No.1, 2008, p125, p142-3. Tripodi, *Edge of Empire: The British Political Officer and Tribal Administration on the North-West Frontier 1877-1947*, Ashgate, 2011, p172

⁵⁴ Leake, 'British India versus the British Empire: The Indian Army and an Impasse in Imperial Defence circa 1919-39'. *Modern Asian Studies*, Vol. 48, No.1, 2014, pp.301-329

⁵⁵ Leake, 'British India versus the British Empire: The Indian Army and an Impasse in Imperial Defence circa 1919-39'. *Modern Asian Studies*, Vol. 48, No.1, 2014, p318

and India rumbled on throughout the war and beyond⁵⁶. In the same year as the Chatfield Committee report, 1938, Congress published a pamphlet that lambasted British Indian fiscal policy and criticized the administration for continuing to spend such large proportions of public money on defence. Summarising his view of the British administration's defence policy the author wrote:

A permanently over inflated Army Budget in India is caused by the maintenance of a standing army which is far in excess of the defence needs of the country, and by the high rates of payment to European troops. Imperial exigencies have caused not only a steady increase in the total number of soldiers employed but also an increase in the proportion of European to Indian troops, which was 1 to 5 in 1857 and is about 1 to 2 today. ...

Military expenditure in India has been kept throughout independent of the control of the Indian Legislature; the military budget is non-votable and the Governor General is personally responsible to the British Parliament for the military administration of the country. This is clear and almost brazen expression of the determination of British Imperialism to continue its armed occupation of India and to preserve her as "a barrack in the Eastern Seas" for protecting British financial and trading interests in the East.⁵⁷

Defence Expenditure in British India During World War Two

It was in the context of this historical tension over India's high military expenditure that a financial agreement, between the British and Indian governments, based on the Chatfield Committee's recommendations, was made in February 1940. The impact of the agreement was that Britain would bear all costs of Indian troops serving overseas except the normal costs had those troops stayed in India, which would be paid by India⁵⁸. All costs of the Indian army were paid up front by India. Britain's share was expressed in the form of a debt to India, to be settled after the end of the war, called the 'sterling balances'.

⁵⁶ Leake, 'British India versus the British Empire: The Indian Army and an Impasse in Imperial Defence circa 1919-39'. *Modern Asian Studies*, Vol. 48, No.1, 2014, pp.301-329

⁵⁷ IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938, p48

⁵⁸ IOR/V/16/412, Budget for 1940-41

The Indian Regular army abroad expanded, between October 1939 and January 1942 from 16,315 to 268,327. The forces within India expanded from 178,058 to 565,238⁵⁹. The Finance Member justified the massive expansion of military expenditure in India in the following terms in 1941:

The [defence] bill is heavy, but the need for security is paramount and the pace of progress must be conditioned by limitations of supply, training and such like rather than of cost. The maximum rate of efficient expansion of which we are capable is the minimum which responsible opinion in the country demands⁶⁰

At the point the 1940 agreement was drawn up, the 1942 Japanese invasion of Burma was not anticipated. As a result, the large charges to Britain resulting from the use of Indian soldiers in Burma came as something of a financial shock and caused deep resentment in certain quarters in London, most notably, with the Prime Minister Winston Churchill⁶¹. In the last weeks of 1945, the Indian sterling balances charged to the UK for the use of Indian troops abroad were increasing at a rate of £7 million a week⁶². After the war the accumulated credits to India for the use of her troops outside India had become huge, totaling Rs 17 billion⁶³. Negotiating their gradual repayment and the split between India and Pakistan would attract the attention of the British parliament and the newly independent administrations long after the Second World War had ended.

⁵⁹ Leake, 'British India versus the British Empire: The Indian Army and an Impasse in Imperial Defence circa 1919-39'. *Modern Asian Studies*, Vol. 48, No.1, 2014, p325

⁶⁰ IOR/V/16/416, Budget for 1941-42

⁶¹ Well after the war Churchill maintained his position that the Indian sterling balances were an injustice to Britain. In a speech in July 1948 in the House of Commons he said "...we should have the right to put in a counter claim [against the Indians] for the immense services which we rendered in saving those 400 million people from being ravaged, pillaged and slaughtered as they would otherwise, to a large extent, have been." HC Deb 15 July 1948, vol 453, cols 1404-10.

⁶² HC Deb 26 February 1946, vol 419, cols 1746-7

⁶³ During the Second World War, Britain accumulated debts, or sterling balances, with many countries aside from India including Canada, Egypt and Brazil, though India was by far the largest sterling balance creditor. On the Brazilian experience see Marcelo de Paiva Abreu, 'Brazil as a Creditor: Sterling Balances, 1940-1952', *Economic History Review*, Vol.43, No.3, pp. 450-469

The accumulation of large 'sterling balances' by Britain through the Imperial use of the Indian army has prompted some scholars to argue that India did not pay her fair share in terms of defence during the Second World War. For instance, Gallagher argues:

...By 1942 India was spending less than three per cent of what Britain was spending on the war effort and about one-third that of Canada. Certainly in 1942, with the Japanese pressing against the frontiers of Bengal and threatening Calcutta, this was defence at bargain prices.⁶⁴

However, India did contribute huge sums to defence particularly viewed as a proportion of government expenditure. She also loaned Britain the funds for the British share for the duration of the hostilities. British India skewed her entire fiscal system to bend to the demands of military expenditure during the Second World War. Public resources on all other types of expenditure were squeezed both by this and by the wartime inflation. Raising the sum of almost 4 billion rupees in a single year (see Table 5.1 below) from the public coffers of a very poor country was a huge effort. India's was not "defence at bargain prices".

⁶⁴ Gallagher, *The Decline, Revival and Fall of the British Empire: The Ford Lectures and Other Essays*, Cambridge University Press, Cambridge, 2004, p138-139

Table 5.1: Total Defence Expenditure in British India 1938-1945

	Total British Indian Public Expenditure Rs, (1000s)	Total British Indian Military Expenditure Rs (1000s)
1938	1696800	473500
1939	1708700	461800
1940	1836900	495400
1941	2094500	736100
1942	2508000	1039300
1943	4073600	2146200
1944	5933000	3584000
1945	7006000	3954900

Sources: The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

There is a different strand of scholarship on colonial defence expenditure with an entirely different approach from Gallagher. One important author has argued, “The so-called defence of India was really the cost of keeping India under British rule”⁶⁵. The British practice of charging India for the cost Imperial projects far outside of India’s borders is described by Davis and Huttenback “Not only was [India] being forced to bear a substantial portion of the costs that should have fallen on the other parts of the Empire, but it was being asked to

⁶⁵ Offer, A., ‘The British Empire, 1870-1914: A Waste of Money?’, *Economic History Review*, Vol.46, No.2, p228

shoulder a portion of the British burden as well. The subcontinent thus supported a military reserve for the entire British Empire.”⁶⁶.

In recent work on colonial political economy, the cost of the military in colonies is increasingly viewed as the price of “domination” since the cost of imposing foreign domination was arguably higher than the cost of maintaining law and order in a non-colonial counterfactual⁶⁷. This feeling was expressed by contemporary Indians too. Professor Vakil described his misgivings about the scale of Indian defence expenditure in 1944:

There is a distinction between the defence expenditure of India and the defence expenditure in India. The expenditure incurred at present is for imperial needs and is on a scale beyond the requirements or capacity of the country⁶⁸.

In the Second World War India was again treated as a ‘barrack in the Oriental Seas’ by Britain and defence again dominated the Indian budget. However, the important new twist was that Britain was liable to pay India back for a large portion of the 1939-1945 defence expenditure. This altered the financial relationship between colony and metropole and had the effect of converting India from a net debtor to Britain to a net creditor and presaged a weakening of Britain’s position relative to her colony.

Defence Expenditure in the States

The States too contributed funds for the defence of India. In the nineteenth century the combined value of the tribute payments from them

⁶⁶ Davis, L. and Huttenback, R., *Mammon and the Pursuit of Empire: The Political Economy of British Imperialism 1860-1912*, (New York: Cambridge University Press, 1986), p155

⁶⁷ Huillery, ‘The Black Man’s Burden: The Cost of Colonization of French West Africa’, *Journal of Economic History*, Vol.74, No.1, 2014, p18

⁶⁸ Vakil, ‘Government Finance’, *Annals of the American Academy of Political and Social Science*, 1944, Vol.233: India Speaking, p136

equated to around 5% of the British Indian defence budget, see table 5.2 below. The military forces in the States consisted of 'Imperial Service Troops' which were placed at the disposal of the British Indian administration in case of emergency and were trained in accordance with British Indian military standards. In addition States maintained forces for the purposes of internal security. Hyderabad had the largest military force of any State. At the time of independence the total strength of the State's military forces was 75,311⁶⁹. However, the States were prevented from keeping numbers of troops beyond the limits set out in the terms of their treaties.⁷⁰

Table 5.2: Percentage of British Indian Defence Expenditure Financed by States' Tributes 1875-1935

Year	Percentage of British Indian Defence Budget Financed by Tributes from the States
1875	4.7%
1905	2.8%
1918	1.2%
1935	1.6%

Sources: The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954. Calculations exclude ad hoc gifts from the Princes to the British Government for the purposes of defence. These were probably substantial in the case of the First and Second World Wars.

⁶⁹ Menon, *Integration of the Indian States*, First published 1955, 2014 edition, Orient Black Swan, Hyderabad, p405

⁷⁰ "The treaties with most of the larger States are clear on this point. Posts in the interior must not be fortified, factories for the production of guns and ammunition must not be constructed, nor may the subject of other States be enlisted in the local forces. ... They must allow the forces that defend them to obtain local supplies, to occupy cantonments or positions, and to arrest deserters; and in addition to these services they must recognise the Imperial control of the railways, telegraphs, and postal communications as essential not only to the common welfare but to the common defence.", *Imperial Gazetteer of India Vol IV*, 1907, p85-86

The Table 5.2 above shows that the proportion of All Indian defence financed by the monetary contributions of the States declined over time. This is a result both of the expansion of military expenditure and the declining value of the tributes.

Table 5.3: Contribution to Indian Defence by Mysore and Travancore States 1905-1945

Year	Percentage of British Indian Defence Budget Paid for by Tribute of Individual States		Percentage of States' Budgets Spent on the Tribute	
	Mysore	Travancore	Mysore	Travancore
1905	1.67%	0.38%	15.12%	7.78%
1914	1.60%	0.37%	15.92%	4.61%
1925	0.63%	0.15%	10.11%	3.99%
1938	0.40%	0.17%	4.80%	2.93%
1945	0.05%	0.02%	1.93%	1.12%

Source: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954. 1925 figures for Travancore use 1926 data. 1945 figures for Mysore use 1944 data. In 1928 and 1937 the nominal value of the Mysore subsidy was reduced in the course of the Mysore subsidy dispute, as described above, which partly accounts for the decline in the table. However, the Travancore subsidy was fixed in nominal terms throughout the period.)

British officials understood the States' relatively small contribution to Indian defence. Viceroy Curzon was aware in 1904 that the financial contributions from the States towards defence were not proportionate to those of British India⁷¹. The Resident of Mysore said in 1924 "...it appears that the percentage [of public revenue] required from the States [for defence] is very

⁷¹ Government of India, Foreign and Political Department, *Summary of the Proceedings of the Government of India in the Foreign Department During the Viceroyalty of Lord Curzon of Kedleston, January 1899 to November 1905: Native States*, Calcutta, Government Press, 1908, p46

much lower than the burden of British India where it [defence] amounts to nearly 36 per cent of the gross revenues.”⁷². The proposed federal scheme of constitutional reform which was under consideration in the inter war period may have offered the opportunity of harmonizing fiscal policies across British India and the States, enabling a greater contribution from the States for defence. Indeed, fiscal harmonisation of this type was an aspect of the scheme, which worried contemporary legislators in the States⁷³. However, as the scheme never came into effect, the old tribute system continued to regulate the States’ contributions to Indian defence finance up to independence. Along with it remained a built in mechanism for shrinking the real value of the tributes and therefore shrinking the States’ defence contributions.

In the late nineteenth century Travancore spent a relatively high proportion of its budget, 14%, on defence, though this was far short of British Indian expenditure which was at 29% in the same period. By the 1930s Travancore’s defence expenditure comprised only 3% of public expenditure, which was close to the proportion of the budget in African colonies in the same period⁷⁴. The much higher public expenditure on defence in British India than in Travancore can be appreciated with a comparison of per capita real defence expenditure figures in both territories. In the late 1920s, in British India around

⁷² IOR/R/2/36/353, Letter of 7th July 1924 from the Resident of Mysore to the Secretary of the Political Department of the Government of India

⁷³ Concern about the potential harmonization of customs rates between Travancore and British India under the proposed federal scheme was raised in the 1933 Presentation of the Budget debate at the Shri Chitra State Council in Travancore, Proceedings of the Travancore Sri Chirta State Council, Vol.1, Superintendent Government Press 1934, Presentation of the Budget for 1933-1934 in July 1933. Kerala State Archives

⁷⁴ In Frankema’s sample of 8 African colonies in the 1930s is less than 5% of the budget in 7 of the 8. See Frankema, ‘Colonial Taxation and Government Spending in British Africa, 1880-1940: Maximising Revenue or Minimising Effort?’, *Explorations in Economic History*, Vol.48, 2011, Appendix 1 p148

2 rupees per capita were spent on defence compared with 0.3 rupees in Travancore.⁷⁵ In British India this increased to 3 rupees per capita for most of the 1930s and increased further during World War Two, peaking at over 10 rupees per capita in 1945. In comparison, expenditure on defence never rose above 0.6 rupees per capita in Travancore in the last twenty years of colonial rule⁷⁶.

The total proportion of revenues spent on the military in Mysore was higher than in most other States because of its large tribute payments. Even after the tribute reduction in 1928 Mysore was paying 6.6% of its revenues on the tribute with an additional 5% on the State military. The comparatively high military expenditure in Mysore, compared to other States, persisted into the Second World War. In 1941 Mysore paid 8% of its budget on the subsidy and military compared to 7% in Hyderabad and under 4% in Travancore.

Hyderabad did not pay a subsidy in the usual way because of its lease of Berar to the British. Therefore for this State the military expenditure figures are composed of domestic military expenditure alone. The absence of a tribute kept the proportion of the revenue spent on the military in Hyderabad quite low. However, as all these resources were devoted to the domestic military, Hyderabad's military investment was greater than that of many other States. Some States invested even more heavily in the military such as Patiala. The last Maharaja of Patiala allocated a huge proportion of State revenues to himself and

⁷⁵ All calculations of states' military expenditure include both military and subsidy expenditure

⁷⁶ Author's calculations. Statement applies to twentieth century where all the necessary data are available but is likely to extend further back into the nineteenth century. All figures in the paragraph are in 1928 British Indian rupees. The Travancore defence figure includes both subsidy and non-subsidy military expenditure

his family. In eagerness to demonstrate loyalty to the British he also spent generously on the military during the Second World War. The Patiala budget for 1941-42 featured 20.11 lakhs on the Army and Rs 6.13 lakhs on police in the same year, which was about 1/7th of the State revenues⁷⁷.

Table 5.4: Defence Expenditure in British India and the States 1941

Region	Defence Expenditure 1941 (for the States figures include military and tribute expenditure)	
	Nominal Military Expenditure (Rs)	Percentage of the budget spent on Military and Tribute
British India	291300000	35.14%
Travancore	1761673	3.89%
Cochin	317646	2.79%
Mysore	4155635	8.04%
Hyderabad	7363000	6.99%
Patiala	2011000	14%

Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954.

Many of the princely administrations were eager to demonstrate their loyalty to the Empire during the war in terms of military donations. Voluntary contributions by the States to the war effort in World War Two up to 1945 totaled more than 5 million pounds in addition to many gifts of capital and machinery⁷⁸.

The erosion of the value of the tributes speeded up during the war because of the high inflation of that period. Although the States gave one off donations of war contributions and financed small defence forces within their

⁷⁷ IOR/R/1/1/3472, Political Department, Political Branch, Finances of the Patiala State, Marked Secret

⁷⁸ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p185

borders, their military expenditure, by every measure, was minimal compared to that of British India. In this way, the Princely States were increasingly insulated from the cost India's large army and of the Second World War.

It is ironic that the section of India lauded by twentieth century British imperialists and conservatives for their loyalty were also those who escaped paying for a proportionate cost of defence. By contrast, British India, the homeland of the independence movement, shouldered the bulk of India's defence and disproportionately financed the efforts to retain India within the British Empire.

The British Indian budget was completely readjusted for the imperial war effort. What has not been recognized hitherto is that the States escaped this radical budgetary shift towards defence expenditure during World War Two. This enabled other areas of government activity to be maintained and even expanded in the States during the war and the last years before independence.

Political Unrest and Internal Security Expenditure

The noted Indian economist at the University of Bombay, Professor C.N. Vakil was an active contemporary commentator on late colonial Indian public finances. Regarding security expenditure in British India, Vakil wrote in 1944

The State in India has behaved like a police state concerned mainly with the preservation of law and order. The laissez-faire policy of the ruling country was applied without due consideration to the requirements of India.⁷⁹

⁷⁹ Vakil, 'Government Finance', *Annals of the American Academy of Political and Social Science*, 1944, Vol.233: India Speaking, p134

The maintenance of law and order was a particularly important public policy objective in British India. The first items in Fitzjames Stephen's, legal member of the Viceroy's Council 1869-1872, list of elements of European civilization that should be transplanted to India are "peace, order, the supremacy of law"⁸⁰. This reflects the traditional liberal concerns for security of property and the enforcement of contracts. In an Indian context the preservation of order had added salience for the British after the 1857 mutiny-revolt. Disorder in the sub-continent not only meant crime for the British in India but also the possibility of the tiny European minority being overwhelmed by their colonial subjects. The importance of this aspect of government is reflected in the British Indian budget where jails and police, here grouped together in one measure of internal security, consistently composed a large portion of expenditure. Throughout the period internal security was the second largest item of expenditure in British India after defence. It shrank as a proportion of expenditure in British India during the Second World War. This was not because the colonial administration had lost its traditional concern with security. Rather, the military took over some security responsibilities during the war and the massive expansion of defence expenditure during the hostilities dwarfed all other areas of public expenditure.

At the end of the 1930s there was an upsurge in political movements and protest in many States against the Princely governments. This development was connected to events in the preceding years in British India. Congress had conducted civil disobedience campaigns in directly ruled India from the 1920s.

⁸⁰ Stephen, *The Nineteenth Century*, Vol. XIV, No. LXXX, p554

These organized protests did not generally spread to indirectly ruled India. However people in the States watched these events closely. In 1935 the final major constitutional reform in British India before independence brought elected Indian politicians into positions of power as never before. Such reforms in British India put into sharp relief the autocratic political systems in place in the States, which partly explains the timing of unrest in the States in the years following 1935.

The proportion of budgets devoted to internal security was much smaller in the large States than in British India. Despite being more autocratic regimes, the monarchs spent less on jails and police throughout the period. There were some isolated exceptions to this in the late 1930s and 1940s when events suddenly made monarchs invest in their security apparatus. Nevertheless, over the period as a whole, the broad pattern is that a greater proportion of British Indian budgets were directed towards jails and police than in the States⁸¹.

In both British India and the States, security expenditure increased during periods of political agitation. This section will describe political agitations and the accompanying changes in security expenditure in British India and the large States. In Travancore, the development of various local political movements including the Travancore State Congress and the Communist party threatened the legitimacy of the monarchic regime. The Travancore State attempted to quash these movements in the 1930s and 1940s by using both repression and compromise. In Hyderabad, security expenditure spiked in 1947 during the

⁸¹ Episodes of internal unrest were dealt with both by the police and by the army making a strict distinction between expenditure on internal versus external security difficult.

State's failed bid at independence from India. These episodes are described in the following sections.

Internal Security in British India

In the inter-war period internal security formed about 16% of the British Indian budget, see Table 5.5 below. Over the inter-war period this gradually increased, year on year, reaching almost 20% in 1938. This pattern was undoubtedly related to the intensification of nationalist agitation in the same period in directly ruled India. Political agitators were arrested and jailed and this required the use of more government resources. In addition to the Congress led nationalist campaign, in the inter war period, the British internal security apparatus was also used to quell communal unrest in Malabar in South India and violent incursions by armed tribal groups on the North West Frontier, the boarder with Afghanistan. This last enterprise was particularly expensive; the Finance Member cited it as one of the reasons for the large British Indian deficit in the year 1921-22⁸².

In 1920 Gandhi led Congress into a new policy of non-cooperation. This first episode of non-cooperation lasted between August 1920 and February 1922. Gandhi eventually called it off after a bloody riot, which compromised his principle of non-violence. This campaign was a political watershed in being a prolonged and organized period of resistance to Imperial rule. The Government of India pursued a conciliatory policy towards civil disobedience in 1920 and 1921. This changed in 1922 when a tougher stance was adopted. A

⁸² IOR/V/16/363, Budget for 1921-22

contemporary historian of the ICS commented on the demands placed on state resources by the official response to the civil disobedience campaign of the early 1920s.

...It had hitherto been possible to uphold law and order without much difficulty owing to want of cohesion among the forces opposed to it, but the Civil Service and the Police now had to face a much more difficult situation owing to the organisation of the movement.⁸³

Even after the civil disobedience campaign was called to an end in 1922 there were still significant internal security operations carried out in British India sometimes with the assistance of the armed forces. The same historian states:

With the subsidence of the non-co-operation movement there was a return to more peaceful conditions, though in 1923 it was necessary to call out troops in aid of the civil authority on thirty-six occasions.⁸⁴

The British Indian state continued to be hawkish in maintaining order throughout the 1920s. The 1928 report of the Simon Commission states “troops are employed many times a year to prevent internal disorder and, if necessary, to quell it”⁸⁵.

There was another episode of civil disobedience in 1930 including the widely publicized Congress campaign, or *satyagraha*, against the salt tax. Over 60,000 of the participants in the movement were arrested in that year, putting pressure on the British Indian criminal justice system.⁸⁶ Measured in real terms, British Indian security expenditure was highest in 1930 of any year from the late nineteenth century to independence. This is partly because the deflation affecting India in the 1930s meant that real government expenditure in general

⁸³ O'Malley, *The Indian Civil Service 1601-1930*, Frank and Cass, 1965 (written 1931), p138

⁸⁴ O'Malley, *The Indian Civil Service 1601-1930*, Frank and Cass, 1965 (written 1931), p140-1

⁸⁵ Cited in O'Malley, *The Indian Civil Service 1601-1930*, Frank and Cass, 1965 (written 1931)

⁸⁶ Brown, J., *Modern India: The Origins of an Asian Democracy*, Oxford, Oxford University Press, 1994, p277

was higher in this period. However, it was also a consequence of the 1930 Civil disobedience campaign.

Table 5.5 below shows that the proportion of public expenditure devoted to security in British India was far in excess of the large Indian States or African colonies. Frankema's public finance data from a sample of 8 African colonies shows public expenditure on internal security formed between 5 -9% of the budget in those colonies in the 1920s and 1930s while in British India it was 15-20% of expenditure⁸⁷.

Table 5.5: Expenditure on Internal Security in India and Other Colonies 1925 and 1938

	Public expenditure on Internal Security (% of the Budget)	
	1925	1938
British India	16.4	16.7
Travancore	3.3*	3.0
Mysore	7.9	8.1 [^]
Hyderabad	9.3	8.0
Nigeria	7	6
Kenya	9*	6
Mauritius	8	9

Sources: The Statistics of Travancore, Various Editions, The Statistical Abstract of Mysore, Various Editions, The Statistical Yearbook of Hyderabad, Various Editions, A Review of Hyderabad Finance, 1951, The Finance and Revenue Accounts of the Government of India, Various Editions and The Banking and Monetary Statistics of India, Reserve Bank of India, 1954. (* data for 1926, ^data for 1937. Indian data: Author's calculations. African data: Frankema 'Colonial Taxation' p148)

The inter war period in British India was a time of organized protest against colonial rule. However, it was also a time in which the British Indian institutions were gradually reformed in ways that, at least partially, reflected some nationalist demands. There was a gradual expansion of the franchise after both the 1909 Minto-Morley Reforms and the Montagu Chelmsford reforms of

⁸⁷ Frankema, Colonial Taxation Africa, Appendix Table 1, p148. Countries in the sample are Gambia, Sierra Leone, Gold Coast, Nigeria, Nysaland, Kenya, Uganda and Mauritius

1919, which further expanded the electorate and initiated dyarchy. Further constitutional change occurred under the 1935 Government of India Act. The 1935 changes came into force in 1937 when provincial autonomy was implemented under elected, Indian ministers and suffrage was extended again.

In 1939 the Congress led provincial ministries who had been elected in 1937 under the new rules resigned en masse. This was a protest against the Viceroy's declaration of India's entry into World War Two without any Indian politicians having been consulted. Thereafter, those provinces were run by their Governors under emergency powers. In addition, many democratic freedoms were suspended during World War Two, as they had been in World War One, under the Defence of India regulations⁸⁸.

In 1938 the nationalist economist Ahmed singles out the pattern of high security expenditure in colonial India as a key symptom of political repression:

One of the most notable features of the Indian financial scheme is the enormous expenditure, which is incurred annually on all those services, which are designed to suppress every expression of discontent with the present system of government and every popular urge to secure the political emancipation of the country...⁸⁹

In his view, the British security system was needed to enforce Imperial rule in India at a time of growing nationalist sentiment:

The growth of political consciousness among the Indian people, and their realisation of the undemocratic and anti-national character of the present State has

⁸⁸ Before World War One the British Indian government had the power to detain without trial, though it was rarely used. The 1915 Defence of India Act extended the British Indian Government's powers of censorship as well as increasing its powers against political agitators. In World War Two Defence of India rules were again introduced in British India and were often copied, word for word, in equivalent legislation in the States

⁸⁹ IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938, p53-4

caused a progressive strengthening of the administrative machinery for the maintenance of law and order....⁹⁰

During the Second World War the real expenditure on security in British India declined to its lowest point for twenty years but this was more than made up for by the massive increase in military expenditure. The army was increasingly used for internal security purposes during wartime. The Cripps mission in 1942 offered India independence after the end of the war on the condition that there would be no further constitutional change for the duration of the war. After Congress rejected the Cripps offer, it embarked on the 1942 Quit India movement. This movement often descended into violence as it was run by junior and more inexperienced Congress activists, most of the leaders of the movement having been arrested and jailed. The British used their expanded wartime army to quash the Quit India movement, at its outset marshaling fifty battalions of troops for this purpose.

Internal Security and Unrest in the States

The States were more autocratic polities than British India throughout the late colonial period. They lagged significantly behind British India in terms of key measures of democracy such as the representativeness of legislatures and the breadth of the franchise. Nehru, no friend of the States, criticized them for their authoritarian approach to government. In his book *The Discovery of India*, he describes them in the following terms:

Some of the princes are good, some are bad; even the good ones are thwarted and checked at every turn. As a class they are of necessity backward, feudal in outlook,

⁹⁰ IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938, p53-4

and authoritarian in methods, except in their dealings with the British Government, when they show a becoming subservience.⁹¹

This section explores the regional differences in security expenditure between British and Princely India. The States were the regions in which citizens' desires for greater democratic representation were accommodated the least. Nevertheless, the large States' governments were also able to spend a much lower proportion of public resources on security than British India.

Many of the Princes publically defended the parallel system of comparatively autocratic institutions in the States and more democratic ones in British India. In 1928 The Maharaja of Patiala expressed his desire that, even within a federal India the States should not need to introduce further democratic reforms:

We [Princes] cannot from our present experience envisage with any degree of equanimity the prospect of control by Legislature, responsible to an electorate bearing some resemblance to the present one [in British India] ... We would plead for a fundamental consideration ... as to whether there be not room within the confines of this country for two sister polities, albeit dissimilar in size and organisation, in one of which the democratic, and in the other the monarchic, principle is embodied.⁹²

Some Indian monarchs even tried to use government funds to undermine Congress's activities in British India to prevent the nationalist threat spilling over into their own space. Secret documents from the Political Department reveal that in 1930 the Nizam of Hyderabad offered the sizeable sum of Rs 20 lakhs to the Viceroy to assist with all-Indian anti-Congress activities⁹³.

⁹¹ Nehru, *The Discovery of India*, Oxford University Press, Delhi, 1946, p312

⁹² Major-General, H.H. The Maharaja Dhitaj of Patiala, *Public Pronouncements in Connection with the Indian States Committee*, Spottiswoode, London, 1928, p13-14

⁹³ The money was refused by the British Indian administration on the grounds that if it became known, it could provide a propoganda coup to Congress supporters in Hyderabad. IOR/R/1/1/2017, 'Proposed Donation by His Exalted Highness the Nizam of Hyderabad to Combat the Civil Disobedience Movement', Foreign and Political Department, Government of India, 1930

Other Indian Princes extended support to at least some elements of Congress's programme though this fell short of support for full democratic government. The Maharaja of Mysore, a Congress enthusiast who followed the Gandhian practice of hand spinning, expressed aristocratic distain for sharing the government of his State with other Indians under the mooted federal scheme. He could not conceive of his State being ruled in a federal system "composed mainly of persons of [our] own race, belonging to a social class far beneath [us] in rank"⁹⁴. Thus, even the ruler of Mysore, one of the most progressive States, and a Gandhian, was decidedly not an enthusiast for democracy.

In the first decades of the twentieth century when British India was experiencing successive waves of constitutional reform and democratization, political change in the States was limited and incremental. By the early 1930s many States had introduced legislative assemblies but official appointees generally dominated these institutions. In addition, monarchs and Dewans could introduce policies by proclamation and bypass the assemblies if they chose to do so. The Indian monarchs were rarely encouraged by the British to take constitutional reform seriously. Among the States, Mysore was early to introduce administrative reforms to increase the level of representativeness in its political institutions. While Congress praised these moves they often provoked objections from the British. The founding of a legislative Council in 1907, for instance, was greeted with disquiet by the British authorities⁹⁵. But even in Mysore, the legislative council had a majority of government appointed

⁹⁴ IOR/R/2/36/353, Letter of 15th July 1924 from the Maharaja of Mysore to the Viceroy of India

⁹⁵ Manor, J., 'Princely Mysore before the Storm: The State-level Political System of India's Model State', *Modern Asian Studies*, Vol.9, No.1,1975, p37

representatives until 1947⁹⁶. So the early twentieth century reforms in the State were anything but radical.

In 1932 the new Maharaja of Travancore introduced modest constitutional changes to the State's legislature, increasing the powers of the Sri Mulam Popular Assembly. The constitution was submitted to the Political Department for comment and though they did not recommend any meaningful changes they did state that the scheme was "a little premature"⁹⁷. By the end of the 1930s there were many British and Indian voices calling for extensive constitutional reform in the States as their political backwardness relative to British India was becoming embarrassing. This group included the Maharaja of Mysore who in 1938 pressed Linlithgow to more actively encourage good government in the other States⁹⁸.

Congress' February 1938 Haripura declaration signaled a closer interest by the party in the States' internal affairs. It stated that it could only support a federation composed of democratic constituent parts, which increased pressure on the Princes to progress faster with institutional reform. Additionally, Congress party members were given the right to engage in political movements in the States. This statement by Congress encouraging democratic reforms also

⁹⁶ Manor, J., 'Princely Mysore before the Storm: The State-level Political System of India's Model State', *Modern Asian Studies*, Vol.9, No.1,1975, p53

⁹⁷ Cited in Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p84

⁹⁸ Copland argues that the British in the political department and residents in the states often worked against democratic reform in the states, undermined the proposed federation and tried to side with traditional institutions in the states. See Copland, I., 'The other Guardians: Ideology and Performance in the Indian Political Service', in Jeffrey, R., (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978 Manor, J., 'The Demise of the princely Order: A Reassessment', in Jeffrey, R., (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p309

gave confidence to democratic movements in the States, which influenced the widespread expression of popular discontent in many States in 1939. The Congress declaration together with the implementation of the 1935 reforms in British India in 1937 fuelled democratic aspirations in the States. Ouwerkerk, present in Travancore at the time, commented that in that year “The State people watched the provinces [of British India] running their own affairs [after the elections in 1937 under the new constitution] and saw no reason why they should not run theirs.”⁹⁹ Subjects of the States wanted to secure constitutional concessions from their Princes before the monarchs acceded to a federation which could entrench their, largely, autocratic rule.

There is little hard data on the comparative experiences across the States of politically motivated unrest in the early twentieth century. There were episodes of communal unrest between different religious or social groups in the States, just as there were in British India. However, in the inter-war period no States experienced organized and prolonged civil disobedience in the style of the Indian National Congress in British India. This is partly because the INC had a policy of remaining distant from politics in the States. Nehru returned the hostility felt by monarchs like the Nizam of Hyderabad towards Congress¹⁰⁰. He was a native of Kashmir, a Princely State, and interested in States’ affairs. He described the States as “probably the extremest [sic.] type of autocracy existing

⁹⁹ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p111

¹⁰⁰ Not all Congress party leaders were as hostile to the states as Nehru. Romesh Chandra Dutt, former Dewan of Baroda and Congress President pointed to the states as setting the standard of good government in colonial India. Copland, I., *Princes and the Endgame of Empire: 1917-1947*, Cambridge University Press, Cambridge, 1997, p29

in the world”¹⁰¹. Congress’ policy of remaining aloof from politics in the States changed only in 1938 from which point organized protests in the States proliferated. Various organisations were founded locally in the States with Congress in the name. These were inspired by, but separate from the organization led by Gandhi and Nehru. Many States, both large and small, experienced unrest after Congress’ Haripura declaration. Some States responded with repression, believing themselves still to be secure in the support of the British Indian Government. Others, however, chose to compromise with the movements in their States and agreed to introduce more representative institutions.

In Mysore, internal security expenditure in the inter-war period was 8% of the budget as shown in Table 5.5 above¹⁰². There was no significant increase in the proportion of public revenues spent on internal security in Mysore in the 1930s and 1940s. In this State internal security expenditure remained at around 8% of the budget throughout the 1930s and declined in the 1940s to around 5%¹⁰³. Manor, an expert on Mysore politics, argues that the State’s authorities did not undertake a crackdown on the local Congress movement in order to maintain its reputation as a progressive State¹⁰⁴.

In some States that experienced unrest the protesters secured fiscal concessions from the government. In Baroda in 1938 there were protests against the level of land revenue. In 1934-5 33% of government revenue in the

¹⁰¹ Cited in Wood, ‘Rajkot: Indian Nationalism in the Princely Context: the Rajkot Satyagraha of 1938-9’, in Jeffrey, R., (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p250

¹⁰² Author’s calculations

¹⁰³ Author’s calculations

¹⁰⁴ Manor, J., ‘Princely Mysore before the Storm: The State-level Political System of India’s Model State’, *Modern Asian Studies*, Vol.9, No.1,1975, p56

State came from land revenue, after the 1938 protests it was cut so that by 1944-5 it composed 25% of total revenue¹⁰⁵.

Yet other States responded to internal unrest with a sudden large increase in defence expenditure. Gandhi chose Rajkot, a small North Indian State, as the site of a move towards Congress mobilisation in the States. Unrest in the State had been mounting in the late 1930s. A large public meeting in 1937 called for a reduction in state spending and reform of the tax system. However, the Raja flouted the demands of the protestors and increased the number of a peculiar type of unpopular commodity monopolies in the State, extending them to rice, matches and cinemas. A new public meeting was held in 1938, which called for the abolition of the monopolies and a limit on the prince's private expenditure of public funds. A coordinated strike took place and nationalist volunteers began flooding into the State. Congress took part in negotiations with the State government and a compromise agreement was reached. After the announcement of the agreement, the agitations in the State stopped. But, under pressure from the British, the Raja did not keep to the agreement and the popular agitations began again and were more violent. There was an official crack down on nationalist activity and mounted police charged demonstrators¹⁰⁶. In the Rajkot administration report for 1938-39, published by the Rajkot government, the unrest in the State is dismissed as "subversive

¹⁰⁵ Hardiman, 'Baroda: The Structure of a 'Progressive' State' in Jeffrey, R., (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p115

¹⁰⁶ Wood, 'Rajkot: Indian Nationalism in the Princely Context: the Rajkot Satyagraha of 1938-9' in Jeffrey, R., (ed), *People, Princes and Paramount Power: Society and Politics in Indian Princely States*, Delhi, Oxford University Press, 1978, p257-62

activities supported by foreign elements"¹⁰⁷. In the State expenditure on internal security increased significantly in response to the unrest moving from 8.9% of expenditure in 1937 to 15.4% in 1938¹⁰⁸.

Political Unrest and Security Expenditure in Travancore

The late 1930s and early 1940s saw a particularly tense political environment in Travancore. A few years before Congress's 1938 Haripura declaration, traditionally underrepresented groups (such as Muslims, some Christian groups and the Ezhavas) in Travancore were making vocal demands for greater rights through their political organisations. They secured an expanded franchise from a reluctant State government in 1935¹⁰⁹. The next elections held under this new franchise, in 1937, generated a more representative First Chamber in Travancore. However, the modest 1935 political reforms in the state did little to satisfy the demands of local organisations such as the Travancore State Congress, for full democratic government. In May 1938 the State Congress submitted a memorandum to the Maharaja petitioning for responsible government as well as the removal of Sir C.P. Ramaswami Iyer from the Dewanship¹¹⁰. The memorandum received no official response. Also in 1938 the Dewan stated publically that it was impossible for powers to be diverted from the Maharaja because that would be inconsistent with the British-Travancore treaties of 1795 and 1805. Later the same year a

¹⁰⁷ IOR/V/10/1822, Rajkot Administration Report for 1938-39

¹⁰⁸ Rajkot administration reports, various editions

¹⁰⁹ Under the electoral system in place in Travancore in the 1920s the franchise was based on a threshold payment of land tax. This gave disproportionate political voice to traditional land holding and high caste social groups. In 1935 changes were made to the electoral rules for the Sri Mulam Assembly, in which the property qualification for voting was reduced. This reform expanded the franchise from 3% to 10 or 12% of the population

¹¹⁰ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p142

question on this point was asked in the House of Commons, which demolished the Dewan's position and concluded that nothing in any of the States' treaties prevented constitutional reform¹¹¹. From August 1938 Ouwerkerk, the contemporary commentator on Travancore's politics, describes there being a state of "open warfare" between the State Congress and the Dewan. He had little patience for dissent or for social movements and he initiated an increasingly repressive regime in the State in the late 1930s¹¹². State Congress meetings were broken up and leaders of the responsible government movement were physically attacked prompting objections from Gandhi who witnessed an instance of this himself when visiting the State in that year¹¹³. The Travancore Administration report of 1938-39, published by the Travancore Government, blamed the "Travancore State Congress" and the "All-Travancore Youth League" for "creating general unrest in the country". The State government declared both organisations "unlawful" and there were further riots in which police were hurt and public buses and police cars were set on fire. The police fired on a crowd and 17 people died together with one policeman. Many people were arrested. By the end of the year the political prisoners had been released, the State Congress's leaders abandoned the programme of civil disobedience in the State and the organisations were legalized again¹¹⁴. However the heavy-handedness of the government's response was associated with the rise of more radical politics among a section of Travancore's society. The Travancore Communist Party was

¹¹¹ HC Deb 21 February 1938 vol 332, col 4.

¹¹² It has been suggested that the firm stance of the Travancore government against Congress was encouraged by the British so that the State would not provide space outside their jurisdiction for the development of the Congress movement, Menon, 'Popular Princes: Kingship and Social Change in Travancore and Cochin 1870-1930', Modern History DPhil University of Oxford, 1998, p245-6

¹¹³ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p140

¹¹⁴ Travancore Administration Report 1938-39, p13

founded in December 1938, which many former Congress members with communist sympathies joined. There had been strikes in Travancore during the civil disobedience movement in the early 1930s, in 1938 there were more, this time by boatmen and coir workers. Their demands included a minimum wage, maternity pay and free medical care¹¹⁵.

The British Resident was so concerned at the excessive force shown by the Travancore police in their encounters with the State Congress, which often led to deaths, that he brought in an officer from British India experienced in riot control to help discipline the local police¹¹⁶. In Travancore the percentage of the budget spent on internal security declined consistently in the twentieth century from 5% in the 1900s and 1910s to 3% in the 1920s and 1930s. Despite the bitter conflicts in Travancore in the 1930s, expenditure on internal security in the State remained at 3.5% of expenditure throughout the 1930s and 1940s, an even lower percentage of the State budget than in the early twentieth century.

In some parts of the State, State Congress members joined in with Quit India demonstrations and *hartals* in the summer of 1942. In 1942 Cripps had committed to the Princes that the States would not be compelled to join any independent Indian union. Wavell, in 1944 and 1945 refused to make such firm promises to the Princes on their future status, which he felt he would not be able to keep. These were met with police repression but overall the Quit India

¹¹⁵ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p165

¹¹⁶ The State government's oppressive approach to the State Congress earned the opprobrium of Rabindranath Tagore who wrote in a message to the Indian press in 1938 saying: "Along with the whole country I have felt grievously hurt that an enlightened state like Travancore should have initiated a regime of fascism with its techniques of shootings, denial of the elementary rights of freedom and deliberate persecution of the Congress. Whatever the provocation or the nature of the dispute, the methods that have been pursued to exert authority are without justification.", cited in Ouwerkerk, *No Elephants for the Maharaja*, p156

movement did not have a big impact in Travancore as leaders in the State were divided over whether to take part¹¹⁷.

In the 1940s the Travancore government became concerned about growing Communist sympathies in the State. Some legislators felt that the food crisis would provoke all out Marxist revolution among those experiencing distress. However, despite these political threats, the proportion of the budget spent on internal security in the State remained low at under 3% of the budget while in British India the wartime proportion of the budget spent on internal security ranged between 16 and 6% and was supplemented by extensive use of the army. Rather than increasing the proportion of the budget spent on internal security, Travancore introduced a wide-ranging and expensive food rationing system.

These events demonstrate both conflict and compromise between polarized political forces in Travancore. The State did not initiate complete repression because although political prisoners were arrested, they were also often quickly released and the government did not substantially increase the budget devoted to internal security. Though the Dewan was loath to divest himself and the Maharaja of powers, he was increasingly held to account by the educated public of his State and its developing political movements.

Security Expenditure in the States After the War

After the end of the Second World War, the hopes of the Princes were pinned on being allowed to survive as constitutional monarchies. They began a

¹¹⁷ Ouwerkerk, *No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*, Manohar, 1994, p216

series of reforms including substantial expansion of democracy within their States to try to present themselves as constitutional monarchies of the Western type. This campaign also included an agreement by the Chamber of Princes in early 1946 on a 'model budget' for smaller States, which involved radically reducing personal expenditure by the royal families¹¹⁸.

The Chamber encouraged members to increase their spending on agriculture, health and education from March 1946 to be at least in line with British Indian provinces. "Although the target was a modest one (the most parsimonious province spent a mere 12.01 per cent of its budget on 'beneficent' undertakings), the following year saw, if anything, a widening in the gap"¹¹⁹.

As late as 1946 the Princes still, in the main, were convinced that their powers would be largely preserved under the new constitutional arrangements for India. Such was their confidence that a British administrator described them as living in 'dreamland'¹²⁰.

The Travancore and Hyderabad administrations seriously considered independence from India in the mid 1940s. In an expression of this both States appointed their own ambassadors in 1947¹²¹. In 1947 Hyderabad had entered into its own negotiations with the Portuguese for leasing the port of Goa to have access to a seaport. Also in 1947, Travancore had concluded a deal with Jinnah, the leader of the Muslim league and, later, the first Prime Minister of Pakistan,

¹¹⁸ Copland, I., *The Princes of India in the Endgame of Empire, 1917-1947*, CUP, Cambridge, 1997, p213

¹¹⁹ Copland, I., *The Princes of India in the Endgame of Empire, 1917-1947*, CUP, Cambridge, 1997, p231

¹²⁰ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p231

¹²¹ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p 251

that if Travancore was subjected to an economic blockade from India on its independence, it could secure food from Pakistan. Travancore had also set aside Rs 50 lakhs to be spent via the Nawab of Bhopal, on positive propaganda about the State in the British press¹²². Perhaps it was because of this propaganda that Travancore found some support for its independence campaign among politicians in Britain, notably Tories¹²³. Travancore's attempt to become independent stopped abruptly after an assassination attempt against Sir C.P. Ramaswami Iyer in July 1947¹²⁴. The assassination attempt apparently cooled Sir C.P. Ramaswami Iyer's enthusiasm for the Travancorean independence project.

The attempt to separate from India persisted for longer in Hyderabad. Hyderabad was one of the few States not to have acceded to India before independence in 1947. The next year, it looked like the State might attempt to join Pakistan, creating a hole in the centre of India, or that it might become an independent country in its own right. These later two possibilities were unacceptable to India. The Indian army invaded and extracted the State's agreement to join India under force of arms. In the lead up to this episode, Hyderabad increased its military and policing expenditure, perhaps in the anticipation of a clash with India¹²⁵. In Hyderabad inter war expenditure on internal security was consistently 7 to 9% of the budget. The State's internal

¹²² Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p251

¹²³ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p252

¹²⁴ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p258

¹²⁵ The state had also had appointed some independent diplomats to other countries, demonstrating its unwillingness to join with India. Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p251

security expenditure had declined during World War Two, reaching as low as 4.8% of expenditure in 1945. This increased to 6% in 1946 and 8.4% in 1947 during the uncertainty over its post-colonial future. The increase in non-subsidy military expenditure was even more dramatic which went from 3.4% of public expenditure in 1945 to 18.5% in 1947. However, Hyderabad's investment in the late 1940s in the police and army was not enough for it to be able to resist becoming part of the Indian Union in 1948¹²⁶.

The British consistently spent much more on internal security than did the States. Rajkot was a backwater with an unapologetically autocratic monarch who responded to the 1939 unrest with force. Even in that episode, however, the proportion of Rajkot's expenditure on security was lower than that in British India.

As civil disobedience intensified in British India in the 1930s, security expenditure in British India gradually increased to provide the policing and jail resources to deal with riots and a large number of political prisoners. After the outbreak of war, the massively expanded armed services were more frequently used to maintain order in British India, for instance against the 1942 Quit India movement.

Although the British acknowledged throughout the colonial period that India could not be ruled by force alone, the intensifying existential challenges posed to colonial rule from the 1930s generated an expansion in the repressive forces of the State. This can be viewed as an expression of colonial crisis as

¹²⁶ Author's calculations

events soon demonstrated that India could not be held within the Empire either by promises of constitutional change or by force.

In the States the situation was more complex. Many Princes hoped to be able to retain their autonomy and their antiquated political institutions either within an Indian Union, or in extreme cases, as separate countries. In addition, the political protests within the States were often less well organized and less sustained than those run by Congress in British India which could explain why the movements in the States were less threatening to the monarchs. There was no comparable ratcheting up of security expenditure in the States in the 1930s as there was in British India. In those States where policing was significantly expanded, this was largely provoked by a sudden crisis as in the case of Rajkot in 1939 and Hyderabad in 1945-7, rather than a sustained trend. Furthermore, the monarchs were in many cases respected by their citizens even if their Dewans' or specific policies were unpopular. The campaigns in the States rarely sought to overthrow the monarchs; rather they sought reform within the existing princely system. True existential threat to the States was represented by the prospect of a Congress ruled independent India. Congress had no sympathy for the Princes' autocratic system of government or their history of cooperation with the British. The existential threat was felt most acutely in Hyderabad where a religious Muslim monarch ruled over a largely Hindu population. Eventually the Indian army invaded and extracted the accession of the State to India.

The Princes' more moderate expenditure on internal security was certainly not a reflection of a less autocratic outlook than the British. It may have been a result of hubris or misguided faith in British promises that their future

was secure. Alternatively, it could have been a pragmatic realization that force alone could not materially affect their prospects in the face of all out popular rebellion, or against a Congress dominated British India. What is clear is that much fewer of the public's resources were dedicated to policing, trying and jailing their own citizens in the States than in British India throughout the period and especially in the final decades of Empire.

Food Security and Public Policy

Food Supply and Distribution in India During World War Two

Academic analysis of food and nutrition in World War Two India has focused on the terrible famine in Bengal between 1943 and 1944 which killed somewhere between 1.5 and 4 million people. This episode formed a key part of Amartya Sen's path breaking 1981 work *Poverty and Famines*¹²⁷. In that book he presents the entitlement theory of famines under which individuals' paths to accessing food are highlighted rather than macro calculations of food availability. But Bengalis were not the only Indians to experience declining food entitlements during the war. In Travancore and Cochin States there were severe food shortages during the war. This prompted the Travancore government to intervene in significant ways in the food market and to dramatically alter their public finances in a way unseen in British India in the same period.

Like Britain, Travancore and Cochin were heavily dependent on food imports from abroad before the outbreak of war. Official British concern over the food situation in Travancore and Cochin continued well into late 1944 at

¹²⁷ Sen, A., *Poverty and Famines: An Essay on Entitlement and Deprivation* (Oxford: Clarendon Press, 1981)

which point Wavell describes the situation there and in Malabar and Madras as “the most urgent [food] problem.”¹²⁸.

Qualitative sources from Travancore and Cochin indicate that, before the war, Burmese rice made up almost half of the staple food consumed in the two States. The Cochin section of the 1941 Census of India states, “...it has been calculated that the rice produced in the state will not be sufficient to sustain the people here for more than 7 months in the year at most...With the loss of Burma and the consequent stoppage of imports of rice the scarcity of rice has been felt most acutely.”¹²⁹. Under this calculation half of the rice consumed in the two States came from Burma. These supplies were cut off after the Japanese invasion of Burma in 1942.

The Dewan of Travancore made a direct comparison between the food security position of his State and that of Britain: “Until five years ago Travancore and Cochin were largely dependent on Burma for their food-stuffs. We were foolish in the same way as England was foolish and concentrated on cash crops... When Burma fell, we were completely bewildered.”¹³⁰ The cessation of rice supplies from Burma resulted in severe pressures on the Travancore economy. Somehow the meager local supply and small shipments from elsewhere in India would have to suffice.

¹²⁸ Wavell, A., and Moon, P. (ed.), *Wavell: The Viceroy's Journal*, (Oxford: Oxford University Press, 1973), p96

¹²⁹ Government of India, ‘Census of India 1941’, Volume XIX, Cochin, Part 1: Report, 1944, p31. In her memoirs of wartime Travancore, Ouwerkwerk reports the Dewan of the State saying that Travancore’s annual requirements of rice were 617,000 tons while she produced only 250,000 tons. Ouwerkkerk, L. and Kooiman, D., ‘*No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*’, (New Delhi: Manohar.1997), p217-8

¹³⁰ Quote is taken from Government of Travancore, *Selections from the Writings and Speeches of Sachivottama Sir C. P. Ramaswami Aiyar, Dewan of Travancore, Volumes I and II*, Trivandrum, Government Press, 1945, p289

Rationing in Second World War India

One way that Britain and other wartime countries coped with wartime scarcity was food rationing. Such systems reduced the ability for the wealthy to attract all the supplies of essential goods in the economy with their greater purchasing power. Rationing was attempted in several parts of India but was most completely introduced in the States of Travancore and Cochin.

The main source of primary data on wartime rationing in India is a survey undertaken by the Government of India's Department of Food in early 1944, summarized in Table 5.6 below.¹³¹ The rationing survey of India formed part of a manual written by the British authorities to disseminate practical knowledge on the implementation of rationing schemes to Indian regions. When the manual was written, in early 1944, many parts of India had not attempted any rationing at all and in those regions that had, most schemes were confined to cities. Many of the rationing schemes in British India were introduced in areas with relatively high densities of European residents such as the cantonment of Cawnpore and also in strategically important sites for the war effort such as the industrial suburbs of Calcutta and Bombay.

¹³¹ Government of India, Department of Food, 'A Manual on the Organization of Food Control and Rationing', Simla, 1944

Table 5.6: Rationing Schemes in Operation in India in 1944

Place	Princely State or British India	Region	Area Covered	Population Covered by Rationing	Foods in Ration	Extra Ration for Manual Labourers?
Karachi City	BI	Sind	Urban	434,627	Wheat Rice, Millets	Yes
Peshawar City	BI	Punjab	Urban	180,000	Wheat Flour	No
Cawnpore City	BI	United Provinces	Urban, Industrial	800,000	Wheat. Gram. Barley	No
Lucknow City	BI	United Provinces	Urban, Industrial	456,000	Wheat, Gram, Barley	No
Greater Calcutta and Port	BI	Bengal	Urban, Industrial	4,000,000		No
Dacca City*	BI	Bengal	Urban	236,000		No
Madras City and Port	BI	Madras	Urban. Industrial	948,749	Millets, Wheat, Rice and Sugar	Yes
Bombay City and Port	BI	Bombay	Urban, Industrial	2,050,000		Yes
Secunderabad (Cantonment)	BI	Hyderabad State (Cantonment)	Urban	140,000	Sugar	No
Cochin	PS	Cochin	Urban and Rural: Whole State	1,461,000	Rice and Other Grains	Yes
Travancore	PS	Travancore	Urban and Rural: Whole State	150,000**	Rice and Other Grains	No
Bangalore City	PS	Mysore	Urban	573,000	Wheat and Rice	No
Janjira State	PS	Janjira	Urban and Rural: Whole State	106,315	Rice and Sugar	No
Baroda State	PS	Baroda	Urban and Rural: Whole State	2,912,100	Sugar	No
Bhavnagar State	PS	Bhavnagar	Urban and Rural: Whole State	140,000	Millets, Wheat, Rice and Sugar	No
Gwalior State	PS	Gwalior	Urban	160,000	Millets, Wheat and Sugar	Yes
Junagadh State	PS	Janagadh	Urban and Rural: Whole State	770,000	Wheat and Millet	No
Total				15,517,791		

* There is a suggestion that this ration was often not provided because of a scarcity of foodgrains in Dacca.

** There is a discrepancy in the information on Travancore. The survey indicated that the rationing scheme applied to entirety of the State (which had a population of around 6,000,000), this also corresponds with other primary sources on Travancore's rationing. Yet the population rationed is listed as 150,000.

The table includes all rationing schemes that covered populations of 100,00 and above. In addition to those listed above there were a fair number of rationing schemes catering to small populations in both British India and in the very small Princely States. They have been excluded on the grounds that otherwise the table would be very large and cumbersome. In addition, the combined population they serviced amounted to less than 400,000 people, which is fairly insignificant in an all-India context. In almost all cases there is also a ration for children above 2 years of half the adult ration.

Source: Government of India, Department of Food, 'A Manual on the Organization of Food Control and Rationing', Simla, 1944, p115-120.

In Travancore and across the rest of India, it is difficult to get a clear picture of how strictly the rationing schemes summarized in Table 5.6 were enforced. It is also important to note that the quantities of rations represent the amount citizens had a right to buy, usually at controlled prices, they were not provided free. There were reports at the time that many of the poorest could not afford to buy their complete ration¹³². The data in the table give a rough sense of the rationing coverage across India. Out of a population of roughly 389 million, about 15 million fell within a jurisdiction that introduced rationing at some point during the war. This corresponds to about 4% of the total population of British India and the Princely States.

The Travancore Government introduced a rationing system several years before other Indian regions. By 1944, according to government sources from the period, the Travancore food rationing system extended to a large proportion of the State's population. In 1944 the Dewan states:

¹³² This was reported for many regions of India including Travancore. See Sivaswamy, K., *Food Famine and Nutritional Diseases in Travancore 1943-44*, Servindia, Trivandrum. 1945

Travancore and Cochin are now the two units which not only took the initiative in introducing a system of rationing but are taking the system on a State wide basis. Out of a total population of 60 lakhs, 55 lakhs have been included in the ration-cards issued up to the end of June, the rest being mostly land-owners and cultivators who have been permitted to retain the paddy produced in their own lands. Over 10 lakhs of cards have been distributed...Of the above, seven lakhs of cards have been registered. It is remarkable that exactly was done by this Government three years ago is now being done in the Bengal and the United Provinces.¹³³

The Dewan of Travancore described the challenges of administering an extensive rationing programme and the efforts being undertaken in the state in in food policy.

In view of the inadequacy of the local production of food grains to meet our minimum requirements and the present difficulties in obtaining and transporting from outside areas, the food grains required for supplementing our needs, the situation is being met by a rigid system of rationing and by purchase by Government at controlled prices of the excess food grains available with the public for redistribution to the public who are short of their requirements. Though it may be that under the rationing system, every man may not receive his full quota, Government have the satisfaction that everyone will get his due share instead of some getting more than what is required and others nothing at all.¹³⁴

Public Expenditure on Food Policies in Travancore State

There is a rich archival record of Travancore's food policies during the Second World War period. The wartime government's intervention in food markets and Statewide rationing evolved into to a system of food subsidies in the immediate post-war period. This government involvement in food came about through a combination of economic challenges and internal political pressures, notably from local communist groups. By the end of the 1940s Travancore was spending around 17% of the government budget on food distribution and subsidies. This system formed the basis of India's post-independence food rationing system, which persists to this day. The prominence

¹³³ Dewan of Travancore, Sir C.P. Ramaswami Iyer speaking in the Budget Session of the Travancore Legislature, 1944, Kerala State Archives

¹³⁴ Dewan of Travancore, Sir C.P. Ramaswami Iyer speaking in the Budget Session of the Travancore Legislature, 1944, Kerala State Archives

of food availability in the public discourse stands out in the qualitative sources from this period in Travancore's history.

Public expenditure on food administration in Travancore in the war years consisted mainly of purchasing grains, selling those grains via a rationing system and employment of administrative staff to undertake these tasks. In the yearly stages of rationing, in the middle of the war, the administration was not attempting to subsidise the price of food grains. Rather it was attempting to ensure that individuals in the state had the opportunity to buy the rationed quantity of food. It was hoped that this would prevent hoarding and would limit demand pressures to prevent food prices increasing further. The Diwan describes the cost to public finances of the rationing system 1944:

To meet the situation arising out of the scarcity of foodstuffs in the State, Government have til now advanced Rs 13.14 crores for the purchase of foodstuffs. Sales have been effected and remittances made against this advance to the extent of Rs 7.87 crores and the balance stands invested in food stuffs. The commodities purchases include, besides the principal foodgrains imported from outside and local paddy, pulses of various kinds which are not easily procurable by private merchants and for which the States have been allowed quotas. Government have at present in stock non-rationed commodities costing about Rs 92 lakhs. 98 lakhs of paras of local paddy costing Rs 146.55 lakhs were purchased during the year and 61 lakhs of paras were rationed to the public.... A special officer has been appointed and 400 policemen with a supervisory staff are functioning on escort duty and checking. Nevertheless, transport was not as quick as could be desired and pilferage and damage could not be avoided.¹³⁵

The archival records available indicate that even in administratively advanced Travancore, the mammoth task of rationing had unforeseen costs. In 1944 the State government was forced to take out a loan from the Imperial Bank

¹³⁵ Dewan of Travancore, Sir C.P. Ramaswami Iyer speaking in the Budget Session of the Travancore Legislature, 1944, Kerala State Archives

of India to cover the gap between expenditure on food grains and revenues from selling rationed food¹³⁶.

The trend towards greater government involvement in food provision continued in the following year, 1945, when the Travancore government began a scheme of providing free mid-day meals to school children. This was piloted in the State capital Trivandrum, before being extended to other parts of the State¹³⁷.

Table 5.7: Government Expenditure on Food Subsidies in Travancore 1943-1948

Year	Amount of Food Subsidy Expenditure (Rs)	Public Expenditure on Food Subsidy (%)
1943	0	0
1944	710081.53	1.28
1945	982671.72	1.47
1946	710091.41	0.93
1947	1513546.84	1.51
1948	19831085.61	16.57

Sources: The Statistics of Travancore, Various Editions.

Even greater state involvement in food provision took place immediately after the Second World War in a food subsidy scheme, as shown in Table 5.7

¹³⁶ Dewan of Travancore, Sir C.P. Ramaswami Iyer speaking in the Budget Session of the Travancore Legislature, 1944, Kerala State Archives

¹³⁷ Dewan of Travancore, Sir C.P. Ramaswami Iyer speaking in the Budget Session of the Travancore Legislature, 1944, Kerala State Archives

above. It took several years to establish but by 1948 the Travancore government spent almost Rs 20 million on food subsidies, which equated to around 17% of the budget. Explicit figures on the British Indian expenditure on food rationing and food market interventions are not available because the primary sources are not sufficiently detailed. However, it is clear from the evidence presented in the previous chapters that there was no space in the British Indian budgets for interventions on the scale of that seen in Travancore. Moreover, there was an official resistance in British India to an expansion of the State into this type of realm. A revealing statement by the Secretary of State for India in 1943, at the time of the Bengal famine, is illustrative of the general official outlook on food policy in directly ruled India:

Plainly the development of complex "social services" – with registration, compulsory contributions and covenanted benefits – belong to a later stage of industrialisation. The stability and understanding of the Indian proletariat is not yet great enough to make such schemes practicable. But it would seem desirable to provide some permanent relief in kind (the most primitive form of the Poor Law) for the destitute and starving in order to supplement private and religious charity.¹³⁸

Insight into the underlying reasons for the massive government investment in food provisioning in Travancore state comes from the States' budget debates during the 1940s. At this time the burgeoning Communist movement in the region was gaining strength. The party took to grass roots food distribution activities from the early 1940s when food supplies were becoming scarce. This disturbed the Travancorean authorities who were deeply insecure about potential competition to their political legitimacy. Some official voices at this time spoke openly about the threat that food shortages posed to the established political order, citing the risks of riots and revolution:

¹³⁸ *Social and Economic Policy for India: Memorandum by the Secretary of State for India*, War Cabinet, 9th April 1943

When there is scarcity of food in the country there will arise, here and there, cries of unrest and discontent, followed by rioting and even looting. There will be huge crowds coming out into the field carrying red flags and crying revolutionary communistic slogans. Sir, when the masses feel the real pangs of hunger and starvation, no police nor any armed reserve, nor even the military, will be able to pacify them unless they resort to wholesale shooting or lathi and bayonet charges. Resorting to such courses is to give cause for revolution in the State. ...Leaving the country to revolution is not the aim nor policy of any good Government and particularly not of our Government.¹³⁹

The extensive intervention in food markets and public expenditure on food by the Travancore government reveal an expansion in the set of activities undertaken by a late colonial government in India. In no part of British India was there a comparable shift in government activities in response to the food availability and distribution challenges of World War Two. The Travancore administration was concerned about the leakage of political legitimacy from competing groups such as the State Congress and the local Communist movement. Perhaps it was this that forced the autocratic State government to modify its policies and its functions to meet the evolving needs of its citizens.

¹³⁹ Proceedings of the Sri Mulam Assembly, 1942, Mr M R Narayana Pillai (Tiruvella), Kerala State Archives

Conclusion to Part 1

This part of the thesis presented an overview of the main sources of public revenue and public expenditure in British India and three large Princely States. In the late nineteenth century taxation and public expenditure were much alike. Both the large States and British India conformed to a similar model of narrow government activities in this early period though there were signs in the statements made by Travancore officials that this State in particular was becoming more sympathetic to government involvement in social expenditure.

In the early twentieth century customs tariffs on international trade became more common especially after World War One. After some wrangling with the British manufacturing lobby, India joined suit and raised tariffs several times in the inter-war period. This was as much because of budgetary need following high wartime expenditure as it was a reflection of the global trend towards protectionism. Although raising customs barriers solves one set of problems, it also created new ones. The Princes wanted their share of the bounty, which mostly remained in the hands of British authorities that administered many of the coastal trading ports where customs were collected. Though the Princes lobbied for a greater share of customs revenues their efforts were ultimately fruitless. As a result, the States were unable to readjust their tax base away from traditional taxes such as land revenue at the same rate as was taking place in British India. I estimate that at least 10 to 20% of the taxes paid by citizens of the large States were lost to the State treasuries and instead flowed to the British Indian coffers as a result of the customs system. This is likely to be an underestimate.

A key difference in the fiscal systems of directly and indirectly ruled India was the method of financing defence. The States were bound to make fiscal contributions to British India known as 'tributes' or 'subsidies' to contribute to the cost of Indian defence. The amounts of these tributes were set in nominal terms in the treaties with the East India Company. Though initially some of these tributes were very burdensome, especially for Mysore state, their real value was undermined by inflation. By the early twentieth century the value of the tributes was low which translated into a reduced proportion of public expenditure on defence in the States. Although the British noticed that the States were making only a small contribution to these costs, no real attempt was made to reform the system. This was likely because of the bewilderingly complex negotiations that would be necessary with a large number of Princely administrations.

Though the States complained of the erosion of their tax base resulting from the collection of customs by the British, nevertheless, they undertook a significant readjustment of spending policies over the first decades of the twentieth century. All of the three large States significantly increased their expenditure on social programmes such as education and health, though Mysore and Travancore did so to a greater extent than Hyderabad. Meanwhile in British India there was very little change in the expenditure side with defence and security dominating the public fisc. This set the stage for divergence.

Other areas of expenditure, aside from social expenditure, remained important to a similar extent in the large States and British India. In both types of regions administration absorbed a large proportion of public resources. Nationalist figures such as Gandhi targeted the British Indian State for spending

too much public money on, in his view, overpaid European administrators. The data presented here show that the States were little better in this respect. The States had the additional burden of supporting Royal families. These rulers were characterized by the British as spendthrift and indolent. With only a few exceptions – generally in small States in the North of India – I find that representation is unsupported by the data. In the large States the Royals commanded a small and declining proportion of public funds in the early twentieth century.

How were the States able to finance their greater social expenditure? They did not appear to economise on administrative expenditure. One possibility is that they simply taxed their citizens more heavily than in British India. Using a recently developed method of estimating tax extractiveness, I find no evidence to support the hypothesis that the States taxed their citizens more heavily than British India.

From the end of the 1930s the British Indian authorities were faced with the financial challenges of rearmament and war. In a poor country, such as India, where many of the traditional sources of tax revenue were declining in real value, new sources of revenue were required to face these new challenges. This resulted in an expansion of direct taxation such as income tax in the last years of colonial rule. The States followed suit albeit at a slower pace.

The answer to the puzzle over how the States financed their higher social expenditure comes in the analysis of security and defence. In British India defence expenditure ballooned in the Second World War period to over sixty percent of total expenditure but it had been the largest form of public

expenditure in directly ruled India from at least the end of the nineteenth century. In the States, however, defence expenditure was limited to the tribute contributions. These not only declined in real terms, but were set down in treaties and therefore inflexible to sudden changes in circumstances such as world wars. The tribute system acted in practice as a tight cap on defence expenditure in the States, which gave them the opportunity to spend on social programmes in the way they did.

Another area in which the State government spent a lower proportion of public income than did British India was on internal security. Though some Indian monarchs and Dewans engaged in repressive policies, this did not compare to the resources British India dedicated to police and jails. As Congress became increasingly active in the 1920s and 1930s the difference grew with British India dedicating a growing share of resources to internal security.

Wartime presented particular challenges for the Indian economy and its citizens. Inflation was high and food prices rose particularly fast. The most stark outcome of this was the 1943-44 Bengal famine. The British Indian administration in Bengal was criticized at the time and in subsequent scholarship for making insufficient efforts to secure the food entitlements of its citizens. An overlooked case study from the same period in the South of India shows a different official approach to food distribution issues. Travancore State introduced a more comprehensive rationing system than in any other part of India. In the years after the war it embarked on an ambitious food subsidy system, which accounted for almost 17% of public expenditure in 1948, a unique episode in early twentieth century fiscal history.

Part 2. Welfare outcomes in
Directly and Indirectly Ruled
India

Introduction to Part 2

Did government form and fiscal policy connect with welfare outcomes for the people of India? This section of the dissertation examines two main issues connected with issues of nutrition, to gain (an admittedly partial) view upon this uneven Indian landscape. Chapter 6 looks at Southern India and the comparative performance of directly ruled British India with the Princely States, asking whether relative fiscal autonomy provided the states with an avenue for supporting Indian welfare, specifically, whether they were able to ameliorate inequality measured through stature. Finally, Chapter 7 considers the impact on local living standards of a British policy that cut through all boundaries: the railways.

Anthropometric Methods

Anthropometric history uses height, and also other physical measurements such as the body mass index, as indicators of the biological living standard of populations. While decades ago this form of data was controversial, height is now “advancing towards the status of traditional evidence in economics”¹. The methodology relies on a biological relationship between the average (mean) height of a population and living standards. It is important to recognize that this link functions meaningfully only at the level of populations, not for individuals. However, for simplicity of exposition certain concepts will first be explained at the individual level before moving on to the uses of large anthropometric datasets such as the one that forms the basis of this study.

¹ Steckel, R., 'Heights and Human Welfare: Recent Developments and New Directions', *Explorations in Economic History*, Vol. 46 (No. 1, 2009), p4

Final adult height is determined both by genetics and the environmental conditions experienced during the growth period. In other words, both nature and nurture are important determinants of individual final height. The influence of nature can be seen in the correlation between the heights of children and their parents². But nurture also exerts an influence. In particular, if an individual experiences nutritional distress in early childhood, the rate of growth will slow. In situations where this nutritional stress is sufficiently severe, individuals' heights will be permanently stunted: that is, height remains below the level that would have been achieved in optimal nutritional conditions. With a sufficiently large sample of data from a population, the genetic variation in height takes on the characteristic of statistical noise; unusually low height measurements cancel out unusually high values. What is left is the influence of environmental factors.

Adult height is a measure of net nutritional status accumulated over the growing years, and changes over time in the mean adult height of a population are an indicator of changes in the biological standard of living. The concept of 'net nutrition' is important to define early on. It refers to a set of factors that determine final adult height. Included are: caloric intake, caloric demands from physical labour, and the nutritional demands of disease. The supply of energy, or calories, to the human body is determined by the quantity and quality of food consumed³. An individual requires calories even when at rest to fuel functions such as breathing and the basic maintenance of organs. Caloric requirements

² See Mueller, W., 'The Genetics of Size and Shape in Children and Adults', in P. Eveleth and J. Tanner (ed.) *Worldwide Variations in Human Growth* (Cambridge: Cambridge University Press, 1976)

³ There is also evidence that the proportions of different macronutrients are important as well as the total number of calories consumed. Sufficient protein intake seems to be particularly important

increase with activity. In particular, heavy physical labour increases the nutrients demanded in order to maintain a constant level of net nutrition. Finally, disease can increase an individual's caloric demands in several ways⁴. For example, by increasing the basal metabolic rate through fever or through reducing the effectiveness of nutrient absorption as with some gastric conditions⁵. Caloric requirements also vary by gender and by physical size because smaller people require fewer calories to sustain them.

After adult height is achieved, it is largely fixed until old age, irrespective of net nutritional status. Low nutritional status during adulthood will also be expressed through low weight for height, or low BMI. BMI is a meaningful measure of nutritional deprivation throughout life, which is one of the reasons why some anthropometric historians use BMI as another indicator of living standards. If a child experiences sub-optimal net nutritional status, either through insufficient food, exertion from hard labour or disease, the rate of growth will slow as nutritional resources are diverted away from growth. If conditions do not improve within the growing period, then the child will never catch up to the height they had the genetic potential to achieve, leaving the individual permanently stunted⁶. Even if some catch up growth does occur, individuals who have been severely deprived during the growth period are more likely to suffer from long-term health problems.

⁴ There is a literature on the interaction effect of food intake and disease on net nutrition. See Srinivasan, T., 'Undernutrition: Concepts, Measurement and Policy Implications', in S. Osmani (ed.) *Nutrition and Poverty* (Oxford: Clarendon Press, 1992)

⁵ Crimmins, E. and Finch, C., 'Infection, Inflammation, Height, and Longevity', *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 103 (No. 2, 2006), p500

⁶ See Steckel, 'Stature and the Standard of Living', *Journal of Economic Literature*, (December 1995), pp.1903-1940, Bogin, *Patterns of Human Growth*, (Cambridge, 1999), Eveleth and Tanner, *Worldwide Variations* and Stinson, 'Human Biology', (New York 2000)

In populations with good or optimal levels of nutrition, and otherwise propitious environmental conditions, most individuals achieve final adult height in line with their genetic potential. Conversely, in situations in which net nutrition is sub-optimal, environmental conditions exert a depressing influence over the mean height of a population. Early twentieth century South India is one such, sub-optimal, scenario in which disease was widespread, famine still within living memory and access to sufficient food difficult to secure for many sections of society. The challenge is to quantify how disadvantaged people were, and how variation was spread.

One anthropometric approach is to compare mean adult height of a population with itself at different periods of time: differences reflect changes in the environmental conditions. A second method is to measure historical populations against a modern biological optimum, capturing the extent of deprivation. In particular this approach facilitates the study of children's growth, which is more susceptible to environmental stresses than final adult height (which can be moderated through delayed catch-up growth). The most widely used standard is the World Health Organization (WHO₂₀₀₇) height-for-age (HAZ) and weight-for-age (WAZ) growth reference standards for affluent children: <http://www.who.int/growthref/en/>. A standard for affluent Indian children, based on WHO₂₀₀₇ methodology has recently been published.⁷

Mean height is sensitive to inequality because food tends to make up a greater proportion of expenditure by the poor than by the rich. Further, height is a concave function of food consumption, in other words, each extra unit of food

⁷ Marwaha, R. K. et al (2011) 'Nationwide reference data for height, weight and body mass index of Indian school children', *The National Medical Journal of India*, 24.5, pp.269-77

has an increasingly small impact on height. Therefore, when income is redistributed in favour of the already rich, the rich spend less of the money on food, and the additional food bought leads to a smaller increase in height than the declines experienced by the poorer groups. As a result, mean height declines⁸. Industrialization is often associated with an increase in income inequality. As a result the biological welfare of different groups within a society can vary markedly. There is evidence of occupational variation in mean height in economies as different as eighteenth century Western Europe, antebellum Pennsylvania and twentieth century India⁹. High status groups and white-collar workers tend consistently to be taller than laboring and low status groups.

A common strategy in anthropometric history is to organize height data into what is known as 'birth cohorts'. Instead of measuring the mean height of the entire population of all ages, it is split into groups by year of birth, or a range of birth years. So, if the mean height of the 1940 birth cohort is much lower than the mean height of the 1920 birth cohort, this implies a decline in the biological standard of living over time. This decline in the biological standard of living is due to the 1940 birth cohort experiencing lower levels of net nutrition during the growth period.

⁸ Komlos, J. 'Shrinking in a Growing Economy? the Mystery of Physical Stature during the Industrial Revolution', *Journal of Economic History*, Vol. 58 (No. 3, 1998), p784-5. Another explanation of declining heights during the industrial revolution concerns changes in relative prices. As industrialization in manufacturing progressed, the price of manufactured goods dropped relative to agricultural goods. This encouraged consumers to shift their expenditure away from food and towards manufactures, which reduced mean height

⁹ See Cuff, T., *The Hidden Cost of Economic Development: the Biological Standard of Living in Antebellum Pennsylvania*, (Aldershot: Ashgate, 2005), p136 and Guntupalli, A. and Baten, J., 'The Development and Inequality of Heights in North, West, and East India 1915-1944', *Explorations in Economic History*, Vol. 43 (No. 4, 2006), pp578-608

While mean height of a birth cohort indicates biological living standards during the growth period of that cohort, it is also significant in another way. Cohorts with low mean height, tend to experience higher mortality because of the strain caused by early life nutritional stress¹⁰. This was theorized by David Barker and has come to be known as the Barker Hypothesis¹¹. Crimmins and Finch have found a strong negative association in historical European populations between adult height and old age mortality¹². In this way, low mean height is not only an indicator of low living standards in early life, but can contribute to compromised health and living standards throughout life. The direct impact of low stature on health outcomes is one causal mechanism. Other mechanisms have been proposed in work by Deaton and Arora. Using modern US height data, their paper shows a strong positive association between happiness, education and income and height. They argue that since the skeleton and the brain are both developing during the years of childhood, individuals with stunted height, are also likely to have reduced cognitive ability which, in turn influences education, income and, ultimately, happiness¹³.

Mean height has become a standard measure of the net nutritional status of historical societies. Declining mean height of successive birth cohorts is an indicator of worsening net nutrition: for example, deteriorations in diet, health conditions or increasing physical labour by children. Declines in mean height of

¹⁰ Waaler, H., 'Height Weight and Mortality the Norwegian Experience', *Journal of International Medicine*, Vol. 215 (1984), pp1-56

¹¹ For a prominent early work in this now extensive literature see Barker, D., Osmond, C., Golding, J. Kuh, D., and Wadsworth, M., 'Growth in Utero, Blood Pressure in Childhood and Adult Life, and Mortality from Cardiovascular Disease', *British Medical Journal*, 1989, No.298, pp564-567

¹² Crimmins, E. and Finch, C., 'Infection, Inflammation, Height, and Longevity', *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 103 (No. 2, 2006), p501

¹³ Deaton, A. and Arora, R., 'Life at the Top: The Benefits of Height', NBER Working Paper Series, Vol. 15090 (2009), p 8. See also Schultz, T., 'Wage Gains Associated with Height as a Form of Health Human Capital', *American Economic Review*, Vol. 92 (No. 2, 2002), pp349-53

populations or sub-groups within a population are not costless. They represent significant hardship. As mean height responds to changes in a broad set of variables, including health and nutrition, it is sensitive to aspects of living standards that might not be picked up by standard economic measures such as per capita income. For these reasons, stature is now a standard indicator of biological living standards for international organizations such as the World Health Organization¹⁴.

Anthropometric data tends to be sourced from different primary resources from other measures of living standards. This sometimes means that areas of history without any other type of living standards data can be illuminated by anthropometric datasets. For India, the nation-wide data on conventional measures of economic welfare, such as real wages, are scanty even for periods as recent as the early twentieth century. This is perhaps not surprising given that, at its largest, the Indian covenanted Civil Service contained only 1,250 members compared with a population of 353 million. This is equivalent to roughly 282,400 citizens to each civil servant¹⁵. As a result, the colonial government's capacity to closely document the living standards of its subjects was significantly constrained by the limited resources available for the task¹⁶. By contrast, the anthropometric database used in this study, collected by a research organisation, not only provides broad geographic coverage of South India but it also allows detailed study of biological living standards across the

¹⁴ See, for example, WHO Multicentre Growth Reference Study Group. 'Assessment of differences in linear growth among populations in the WHO Multicentre Growth Reference Study.' 2006 *Acta Pædiatrica Supplement* 65(Suppl. 450): pp56–65

¹⁵ Cell, J., 'Colonial Rule', in J. Brown and W. Louis (ed.) *the Oxford History of the British Empire, Vol IV: the Twentieth Century* (Oxford: Oxford University Press, 1999), p232

¹⁶ This was not only the case in India, but also in other colonies across the world. For Africa see Moradi, A., 'Confronting Colonial Legacies: Lessons from Human Development in Ghana and Kenya, 1880-2000', *Journal of International Development*, Vol. 20 (No. 8, 2008), p1109

caste spectrum. This level of geographical and social detail is not yet available in any contemporary South Indian series of wages.

The use of anthropometric data has shed light on important areas of history. Trends in mean stature over time have been documented in the USA and Europe from the eighteenth century to the modern day and progress is being made in doing the same for Asia and Africa¹⁷. One of the early provocative applications of the methodology was to the living conditions of nineteenth century slaves in the USA. The severe malnourishment of slave children was uncovered and shed new light on slave living standards. This type of data has also influenced the debate over living standards during the Industrial Revolution. For England and the USA, the finding that heights, especially of poorer sections of society, trended downwards has reinforced the pessimists' case¹⁸. Another striking finding from this school of history has been the surprisingly high living standards of mid nineteenth century North American plains Indians¹⁹. Groups of nomadic Indians were once among the tallest peoples in the world, which demonstrates that pre-industrial economies were sometimes able to deliver good biological living standards.

Many datasets used by anthropometricians are sourced from prison or military records where height was collected alongside other distinguishing

¹⁷ Guntupalli, A. and Moradi, A., 'Gender Dimorphism: Discrimination in Rural India, 1930-1975', in M. Pal, P. Bharati, et al. (ed.) *Gender Bias: Health, Nutrition and Work* (New Delhi: Oxford University Press, 2009)

¹⁸ Steckel, R., 'Strategic Ideas in the Rice of the New Anthropometric History and their Implications for Interdisciplinary Research', *Journal of Economic History*, Vol. 58 (No. 2, 1998), p807.

¹⁹ See Steckel, R. and Prince, J., 'Tallest in the World: Native Americans of the Great Plains in the Nineteenth Century', *American Economic Review*, Vol. 91 (No. 1, 2001), 287-94, and for an in depth review of anthropometric history see Steckel, R., 'Stature and the Standard of Living', *Journal of Economic Literature*, Vol. 33 (No. 4, 1995), pp1903-40

physical characteristics, while others are from researchers who independently collect data for the express purpose of scientific research. The intellectual tradition behind research into the physical characteristics of populations began in earnest in the nineteenth century when eugenicist researchers were looking to identify the physical and mental differences between races and classes. This research agenda has been termed ‘the mismeasure of man’ because of the unsupportable claims made over the superiority of certain racial and social groups over others²⁰. Such projects extended as far as India under researchers such as H. H. Risley, a British official of the late nineteenth and early twentieth century and the author of *The Castes and Tribes of Bengal*. He collected extensive anthropometric data, part of which was published in an anthropometric appendix to the 1931 Census of India. In South India, his counterpart, E. Thurston, was the first to collect anthropometric data in the region²¹. These studies generally consisted of very small samples and were driven by the desire to catalogue the physical associations of different caste and racial groups in India.

Perhaps because of these unsavory connections, anthropometric data were not used again by academics in the social sciences until the path-breaking work of French academic, Le Roy Ladurie in 1970s. He investigated historical records of French height data and uncovered an association between greater mean height and higher social class, which sparked the development of the new anthropometric history. In the 1980s, the link between stunted mean height and

²⁰ Gould, S.J., *The Mismeasure of Man*, (New York: Norton, 1981) is an excellent overview of this intellectual movement. Anthropometry was also exported to India in the late nineteenth century where officials, notably H. H. Risley, attempted to identify the racial difference between castes. The project failed

²¹ Thurston, E., *Castes and Tribes of South India*, (Volume 1 vols., Madras, 1909)

mortality risk was documented by Waaler, strengthening the usefulness of stature as an important indicator of living standards.

Other breakthroughs followed, including the surprising finding that heights of American soldiers born in the boom decades of the 1830s and 1840s had shorter mean stature than the generations immediately preceding them. The result was unexpected because up to that point heights had generally been correlated with per capita income. So it was particularly interesting to find declining heights in a period of economic growth. As a result, the finding was named the ‘antebellum puzzle’. Further research has established that periods like the 1830s and 1840s in the USA, where the trends in per capita income and mean height move in different directions, are unusual. A study using international data from the twentieth century, found the correlations between per capita income and height to be around 0.87²². The puzzle has since been partially resolved by research documenting worsening non-income factors during the period, including increasing population density and poor urban health conditions. Crowded, unsanitary conditions in urban areas spread disease, contributing to stunted heights. In addition, the trend of increasing income inequality in the period compromised the biological living standards of those at the bottom of the income distribution²³.

One area in which the anthropometric literature remains underdeveloped is in women’s wellbeing. Almost all of the evidence described above comes from male anthropometric data, which means that data on half of society is missing.

²² Steckel, R., 'Height and Per Capita Income', *NBER Working Paper*, Vol. 880 (1982)

²³ Komlos, J., 'Shrinking in a Growing Economy? the Mystery of Physical Stature during the Industrial Revolution', *Journal of Economic History*, Vol. 58 (No. 3, 1998), p782

This state of affairs is largely due to the short supply of female anthropometric datasets for most historical periods. Many height datasets come from military records, which historically, do not contain information on females. A few authors have succeeded in constructing female anthropometric datasets from the records of institutions, which measured both males and females such as prisons²⁴. But there is still much more to be done in this area. The data source used in this study unfortunately contains only male data, perhaps because of the special problems presented in measuring females in India. Such problems include the maintenance of the seclusion of women practicing Purdah which included both Hindu and Muslim women across India. This is particularly frustrating for a study on India where there are important regional differentials in the cultural status of women. Traditionally women have significantly more agency in the work place and the home in southern and eastern India than in northern and western parts of the country²⁵. Seeking out any existing sources of historical female anthropometric data, particularly for India, is an important area for future scholars of health and well being to explore.

A small, but fast growing section of the anthropometric literature concerns Africa and Asia²⁶. Colonialism is clearly an important historical phenomenon affecting historical living standards in many countries in these regions. Much of this branch of the anthropometric literature has tried to address the relationship between colonialism and biological living standards.

²⁴ See Horrell, S., Meredith, D. and Oxley, D., 'Measuring Misery: Body Mass, Ageing and Gender Inequality in Victorian London', *Explorations in Economic History*, Vol. 46 (No. 1, 2009), 93-119.

²⁵ Sen, A. and Dreze, J., *India: Economic Development and Social Opportunity* (Oxford: Clarendon Press, 1995), p176

²⁶ For an introduction to this literature see Steckel, R., 'Heights and Human Welfare: Recent Developments and New Directions', *Explorations in Economic History*, Vol. 46 (No. 1, 2009), p3

Most studies show stagnant biological living standards under imperial rule, suggesting that Westerners did not significantly improve nutrition, health or child labour conditions in their colonies²⁷. There is insufficient data from the pre-colonial period in most of Africa and Asia to demonstrate whether the colonial trends differ from those in pre-colonial times. However, based on existing literature, it is at least possible to say that, by and large, Western colonial administrations did not preside over a widespread improvement in the biological standard of living of colonized peoples.

²⁷ See Moradi, A., 'Confronting Colonial Legacies: Lessons from Human Development in Ghana and Kenya, 1880-2000', *Journal of International Development*, Vol. 20 (No. 8, 2008), pp1107-21. On Ghana and Kenya and Eltis, D., 'Welfare Trends among the Yoruba in the Early Nineteenth Century: The Anthropometric Evidence', *Journal of Economic History*, Vol. 50 (No. 3, 1990), pp521-40. on Nigeria and Guntupalli, A. and Baten, J., 'The Development and Inequality of Heights in North, West, and East India 1915-1944', *Explorations in Economic History*, Vol. 43 (No. 4, 2006), pp578-608

Chapter 6. The biological living standard

Indian anthropometric history

As the largest country in the British Empire, India has attracted significant attention from colonial anthropometric historians. The most recent, and most detailed study in this literature is Baten and Guntupalli's 2006 paper on inter-war North India. They use a large sample of late colonial heights to map mean stature in different North Indian states. The study focuses on the evolution the dispersion of heights as a measure of biological inequality. Despite the highly hierarchical nature of Indian society, which they predicted would lead to high inequality in stature, they find that the difference in height between the tallest and the shortest castes was comparatively small at less than 7cms. In international historical comparison, this is not particularly large.

Other anthropometric researchers have also focused on India. Much of the body of Indian anthropometric history is the work of the Australian research team of Shlomowitz, Brennen and McDonald. They pioneered the modern study of Indian heights and uncovered many new datasets. Much of their data comes from the records of ships transporting Indian indentured labourers en route to plantations in other parts of the British Empire¹. Their data, which spans from the late nineteenth century to independence, show a stagnant trend in biological living standards in India. They argue that this stagnant trend in the biological

¹ See Brennan, L., McDonald, J., et al., 'Towards an Anthropometric History of Indians Under British Rule', *Research in Economic History*, Vol. 17 (1997), pp185-246. for an introduction to the literature on Indian indentured labour see Northrup, D., *Indentured Labour in the Age of Imperialism 1834-1922* (New York: Cambridge University Press, 1995)

standard of living is the result of offsetting developments in economic versus other environmental conditions over the early twentieth century².

In the case of the colonisation of other regions of the world, there has been anthropometric research on the pre-contact period. For instance, in North America, evidence from skeletons has shown that the biological living standard of Native Americans was very high before the arrival of Europeans and declined after colonization.³ No such data exists for India in the pre-contact period. Such a project is more challenging in the Indian context because the time of first contact with European colonisers was so early, by the end of the seventeenth century the East India Company had established its trading posts at Bombay, Calcutta and Madras. By the end of the eighteenth century the East India Company was administering much of the tax system of Bengal. Information on the biological living standard of Indians in the eighteenth century or before is not currently available.

Since the earliest available records of historical Indian heights, the mean stature in this region has been comparatively low. The earliest data has been analysed by the scholars Brennan, McDonald and Shlomowitz⁴. Unfortunately, these studies suffer from small sample sizes and so the results cannot be seen as watertight. Nevertheless, other information supports the position that biological standards of living would have been low in India in the nineteenth and

² Brennan, L., McDonald, J., and Shlomowitz, R., 'Trends in the Economic Well-being of South Indians Under British Rule: The Anthropometric Evidence', *Explorations in Economic History*, Vol. 31 (No. 2, 1994), pp225-60.

³ Komlos, J., 'Access to Food and the Biological Standard of Living: Perspective on the Nutritional Status of Native Americans', *American Economic Review*, Vol. 93 (No. 5, 2003), 252-5.

⁴ See for instance their article 'Trends in the Economic Well-being of South Indians Under British Rule: The Anthropometric Evidence', *Explorations in Economic History*, Vol. 31 (No. 2, 1994), pp225-60.

eighteenth centuries. In the eighteenth century the sub-continent was plunged into disorder with the slow death of the Mughal empire and proxy wars between Britain and France via Indian intermediaries. Also in this period, native industries were suffering from a wave of European imports, a phase known as the deindustrialisation of India⁵. Social factors too were likely to undermine biological living standards in this early period. The caste system was reflected in an unequal distribution of resources, including food. Perhaps even more significantly, the position of women of India has, in most regions, been one of subordination. Practices such as the male breadwinner eating first, followed by the children and grown women last, institutionalised reduced access to food among Indian women. Large gender imbalances in the biological standard of living have an impact not only on the welfare of women, but also on society as a whole. The biological welfare of women influences that of their children, of both genders.⁶ The caste and gender based discrimination in many parts of India combined with low incomes would indicate that the mean height in India in the eighteenth and early nineteenth centuries would have been comparatively low.

The Data

Through a detailed analysis of a new anthropometric database, the current study will deepen our understanding of living standards in Southern India in the late colonial period, contributing to the literature on colonial anthropometrics. A key question is whether higher levels of social spending in

⁵ For a useful overview of this literature see Clingingsmith, D. and Williamson, J., 'Deindustrialization in 18th and 19th Century India: Mughal Decline, Climate Shocks and British Industrial Assent', *Explorations in Economic History*, Vol.45, No.3, 2008, pp.209-234

⁶ Sen, A. and Osmani, S., 'The Hidden Penalties of Gender Inequality: Fetal Origins of Ill-Health', *Economics and Human Biology*, Vol. 1 (No. 1, 2003), p106

the Princely States of Travancore, Mysore and Hyderabad supported a more egalitarian distribution of resources. A ranking of stature across India is not enough to establish this: we need to measure whether inequality in stature diminished or increased. In disaggregating the data by caste, there are opportunities to investigate whether developments in the colonial economy affected members of high and low status groups differently. This chapter will consider how the form of colonial rule influenced stature.

To explore the trends in South Indian biological living standards an anthropometric database was constructed. The core data come from the impressively large *All India Anthropometric Survey*, a nationwide study conducted across most of India in the early 1960s. The *All India Anthropometric Survey* was conducted by an Indian research organization called the Anthropological Survey of India, which was founded in 1945 and still exists today⁷. The anthropometric survey was motivated by a wish to create a comprehensive ethnographic map of India documenting the many different racial groups native to the country. In order to achieve this aim, the project required higher quality anthropometric data than the few pre-existing anthropometric studies provided. Pre-existing anthropometric studies were carried out before independence by people such as British officials, Risley and Thurston⁸. However, many of these early efforts were methodologically flawed with small samples and were confined to relatively small regions of the country.

⁷ For more information on the Anthropological Survey of India see their website: <http://www.ansi.gov.in/default.htm>.

⁸ For the work from this period on South India see Thurston, E., *Castes and Tribes of Southern India* (Volume 1 vols., Madras, 1909)

The anthropometric survey of India, by contrast, sought to cover the whole of India⁹.

This thesis makes use of the ‘South Zone’ section of the data, which covered southern, peninsular India corresponding to the modern Indian states of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu roughly corresponding to the area covered by the late colonial Madras Presidency and the Princely States of Hyderabad, Mysore, Travancore and Cochin. It sampled the heights of around 13,500 South Indian males born between 1905 and 1944. After excluding those aged below 20 years and those above 51 years (born between 1910 and 1941), the sample used here consists of 13,315 individuals. Included in the original survey were individual-level data on height, age, caste or religion and district of origin, in addition to a large number of other anthropometric measurements whose analysis was outside the scope of this study¹⁰.

It is perhaps worth mentioning how this valuable source of anthropometric data was found for this study. Guntupalli and Baten’s work was an important inspiration and starting point. However their work excluded the South, leaving blank spaces on their height map of the country. They had fully exploited the *All India Anthropometric Survey: North Zone* but the title suggested that other volumes might exist. After searching many library catalogues the

⁹ The data from the North Zone has been studied in detail in Guntupalli, A. and Baten, J., ‘The Development and Inequality of Heights in North, West, and East India 1915-1944’, *Explorations in Economic History*, Vol. 43 (No. 4, 2006), pp578-608

¹⁰ Other measurements recorded in the survey included sitting height, head height and auricular height. It is possible that the sitting height data could be useful for other anthropometric researchers. However, after consulting with medical doctors, the author could not discover a use in economic history for the various other measurements collected by the survey

companion volume for the South was found¹¹. This large dataset was then digitized, providing the core of the data used in this study. Figure 6.1 below shows a typical page of the original dataset. The information used in this study are the columns titled 'age' and 'St', which stands for stature and is recorded here in millimeters. The data is organized by State and by caste; this page is from the Tamil Nadu sample and records the Paraiyan caste, one of the Dalit castes.

Figure 6.1: Sample Page of Original Dataset

TAMIL NADU STATE																	541
19. PARAIYAN N = 265																	
Sl.No.	Age	Dt	Tlk	St	SH	HL	HB	MFB	B2B	B3B	TFH	UFH	NH	NB	HC	AHL	AHR
001	35	01	01	1506	812	176	135	105	137	106	111	65	47	36	523	115	115
002	35	01	01	1631	843	181	139	100	134	105	113	63	46	35	530	126	125
003	23	01	01	1616	818	199	145	098	127	093	115	68	48	36	536	123	123
004	35	01	01	1570	807	190	133	101	130	103	106	59	42	36	544	119	122
005	35	01	01	1651	836	181	133	103	129	099	105	58	39	41	514	123	122
006	23	01	02	1597	817	186	131	099	125	090	100	54	38	32	523	124	125
007	38	01	02	1642	835	189	137	102	130	094	112	60	44	36	526	122	121
008	35	01	02	1680	842	180	132	095	128	095	118	64	46	33	509	126	127
009	48	01	02	1700	867	192	136	100	128	097	104	61	46	35	535	120	121
010	40	01	02	1689	857	184	141	097	127	099	109	58	44	36	532	125	124
011	24	10	02	1651	822	187	132	104	133	105	125	68	45	34	546	134	130
012	25	01	02	1620	835	180	142	101	127	100	121	63	47	37	515	126	127
013	35	01	02	1667	821	181	138	105	131	090	113	61	41	36	524	123	122
014	32	01	02	1641	857	192	144	101	128	100	107	58	37	39	530	132	134
015	25	01	02	1623	830	181	147	102	137	097	116	59	39	34	528	125	130

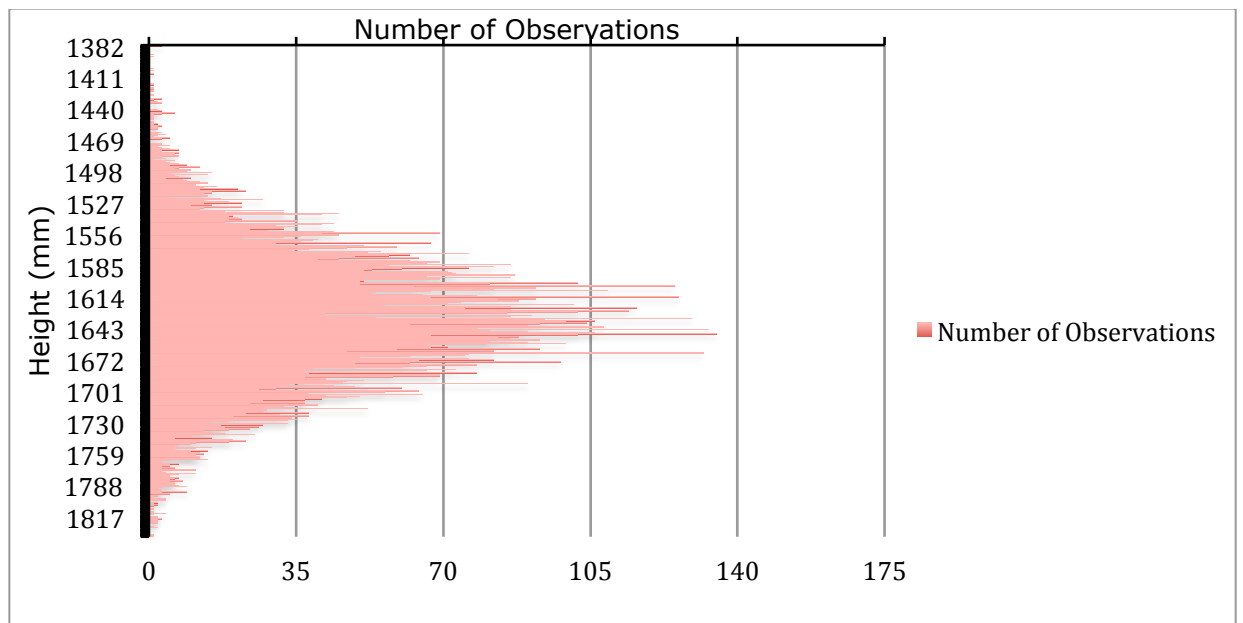
Survey data is a relatively unusual source for anthropometric historians.

More often historical datasets originate from the records of prisons or armies,

¹¹ Some time later, I discovered that one paper has been published which has a small section near the end of the paper using some of the anthropometric data used in this study. The analysis consists of a simple regression with dummies for some castes and for modern administrative regions. See Brennan, L., McDonald, J., et al., 'Towards an Anthropometric History of Indians Under British Rule', *Research in Economic History*, Vol. 17 (1997), p215-6

which lead to selection problems in the samples. For example, conscripts and prisoners tend to come disproportionately from the lower status groups within society¹². In addition, armies often imposed minimum height conditions resulting in truncated samples that are missing shortest end of the height distribution¹³. There are ways of taking these data shortcomings, such as truncation, into account¹⁴. However, for this study, such challenges do not exist since there was no height based selection criterion in the survey data¹⁵. The full height range of the individuals in the sample is shown in Figure 6.2 below.

Figure 6.2: Height Distribution of the Sample



Source: *All India Anthropometric Survey: South Zone*.

The individual level data from the survey is the only section of the database that is a sample of a population. It therefore requires attention to ensure that the sample is representative of the South Indian population. The

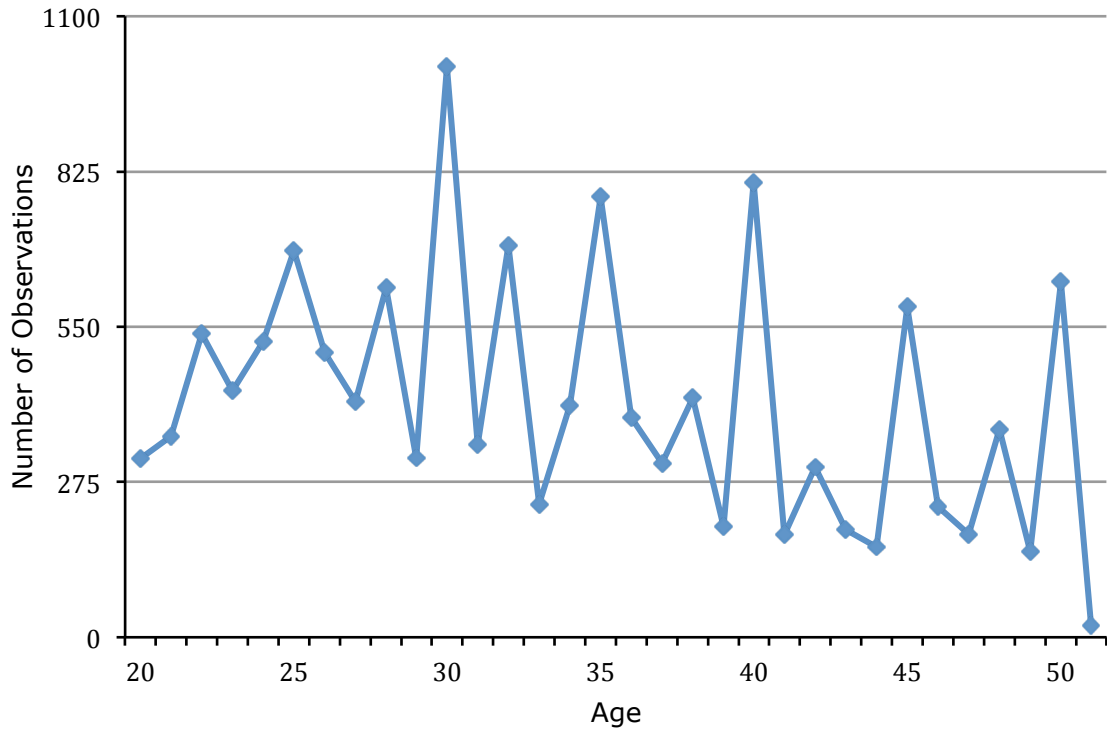
survey adopted a stratified sampling procedure. Each of the 91 different castes and communities included were sorted into large, medium or small categories on the basis of their representation in the population. Large groups were defined as those groups with more than 100,000 members in the population, while medium was between 100,000 and 50,000 and small less than 50,000. The number of individuals sampled followed these categories. 200 individuals were sampled from large groups, 150 from medium groups and 100 from small groups¹⁶. The small groups were mainly composed of isolated tribes. They are over represented in the sample because many of these populations were much smaller than 50,000 and so, on the basis of population size alone, they would not merit a sample size as large as 100. However, this overrepresentation of small groups does not present a problem for the regressions below as dummy variables are included for caste type. Although, some aspects of the survey are unlikely to have been carried out with the precision of a modern study, the *All India Anthropometric Survey* is the earliest large sample of Indian height data and therefore a valuable resource.

One quirk of the survey design is that age was reported, rather than year of birth and the collection of survey data spanned several years. This makes it more difficult to identify the year of birth of individuals, which is required in order to construct birth cohorts. The survey began collecting data in Tamil Nadu in 1961 and moved to Kerala in 1962. Regarding the other two states, Andhra Pradesh and Karnataka, the documents are vague about when the surveys were taken, saying only that they were conducted between 1961 and 1963. So, in line

¹⁶ Rakshit, H. K., et al., *All India Anthropometric Survey: South Zone* (Basic Data), (Calcutta, 1965), p6.

with Guntupalli and Baten's method for resolving the same problem, I assume the surveys in these last two states were conducted in the middle year, 1962.

Figure 6.3: The Age Distribution of the Sample



Source: *All India Anthropometric Survey: South Zone.*

In much of the analysis below, the height data is organized into birth cohorts of five years. This has the advantage of increasing the sample size at each data point, by plotting, for example, the mean height of individuals born between 1910 and 1914.

Demographers have found that self-reported age data, an important part of this study's database, can demonstrate a property known as 'age heaping', where rounded ages are more frequently observed than non-rounded ages. If self-reported ages were reported accurately by a large, representative group of individuals, one would expect ages ending in 0 to be as well represented as ages ending in, say, 3. However, in less developed, and less numerate societies it is

often the case that ages ending in 5 or 0 are overrepresented. This is known as age heaping. It is often interpreted as an indicator of the ability to count back to the actual year one was born, rather than rounding to the nearest five or ten years. For this reason, some economic historians have exploited age heaping as an indicator of the numeracy or ‘human capital’ of historical societies, especially when other data such as literacy is not as widely available. However age heaping also introduces some error into datasets with self reported ages as not all reported ages are accurate, making it impossible to trace some individuals’ true ages¹⁷. The birth cohorts used here are structured so that each one includes one age ending in 0 or 5 so that no cohorts are biased either by not including a ‘heaped’ age or by having too many ‘heaped’ ages. This pattern in the South Indian data used here can be seen clearly in Figure 6.3 above in which many more individuals report ‘heaped’ ages, such as 30 or 35, than non ‘heaped’ ages such as 31.

Another process that should be taken into consideration when using height data is the natural physical shrinking that occurs with age. Since human stature begins to decline at older ages, height measurements of these, very old, cohorts do not reflect the maximum value of adult height. To prevent this introducing a downward bias on the heights of earlier birth cohorts I have excluded all individuals born before 1910, who would have been 51 and above. Similarly, using heights of people when they are young and still growing will

¹⁷ Just as individuals reporting their ages may round up, the investigators taking measurements of heights may have rounded to the nearest millimeter or the nearest five mms. I have tested this and the extent of ‘height heaping’ is minimal for this data but there is some evidence of rounding to the nearest even number. Although this slightly reduced the accuracy of the height data, it does not introduce systematic error as slightly overestimated heights will cancel out the slightly underestimated heights.

introduce a downward bias for later birth cohorts. Therefore, I have also excluded all individuals born after 1942¹⁸. Also excluded were extreme measurements of height (less than 120cm or above 200cm) since these are likely to be transcription errors.

Bias could be also introduced into the data through migration. There is not enough information on the movements of the individuals measured in the survey to control for migration; a problem also faced by Guntupalli and Baten in their study¹⁹. However, before independence, internal migration within India was limited. A paper by Collins has shown persistent wage differentials in late colonial India implying a fragmented labour market with constrained labour mobility²⁰. Therefore, following Guntupalli and Baten's methodology, this study uses the location given in the survey for each individual as both the place of residence at the time of the survey and the place of birth²¹.

The highly stratified nature of Indian society presented some challenges as over 90 different castes and communities were represented in the anthropometric data. This bewildering proliferation of castes has been organized into larger groups for simplicity of analysis. These groups are: Tribal, Dalit, Low Caste, Muslim, Christian, High Caste, Brahmin and Unclassified caste. The complexity of this process of caste classification mirrored, to some extent, the problems faced by British colonial statisticians. The census famously struggled with categorizing and listing castes resulting in dramatic oscillations

¹⁸ See Eveleth, P. and Tanner, J., *Worldwide Variation in Human Growth*, Second Edition edn (Cambridge: Cambridge University Press, 1990)

¹⁹ Guntupalli, A. and Baten, J., 'The Development and Inequality of Heights in North, West, and East India 1915-1944', *Explorations in Economic History*, Vol. 43 (No. 4, 2006), p593

²⁰ Collins, W.J., 'Labour Mobility, Market Integration, and Wage Convergence in Late 19th Century India', *Explorations in Economic History*, Vol. 36 (No. 3, 1999), pp246-77

²¹ For some places, particularly coastal regions, this may be a strong assumption

in the numbers of castes listed from census to census as new methods of classification were periodically adopted²².

The choice of which caste and community groups to use in this study was governed partly by Government of India caste classification systems, such as the scheduled of backward castes and backward tribes (on which the Dalit and Tribal groups are based)²³. Another consideration was to make the groups comparable with those used by Guntupalli and Baten, allowing for comparisons between North and South. For the high and low caste groups I used documentary sources to identify castes' ritual status²⁴. For the Brahmins, Muslims and Christians the process was more straightforward since they are directly recorded as such in the survey. In contrast to the other groups, which tend to be more uniform in their social status whether high like Brahmins or low like Dalit, Muslim and Christian groups are of mixed social status. Several castes were neither mentioned in the scheduled lists nor in secondary sources on high caste groups and these are categorized as 'unclassified caste' and probably correspond to middle status groups, although this cannot be confirmed. The proportion of each of these groups in the sample is shown in Table 6.1.

²² Ghurye, G.S., 'Caste and British Rule', in I. Banerjee-Dube (ed.) *Caste in History* (New Delhi: Oxford University Press, 2012), p40

²³ Scheduled Caste (for Dalit group) data sourced from the Government of India at: <http://socialjustice.nic.in/sclist.php>. Scheduled Tribe (for Tribal group) data sourced from the Government of India at: http://censusindia.gov.in/Tables_Published/SCST/ST%20Lists.pdf. These government documents are comprehensive lists of castes and tribes that were sufficiently disadvantaged by caste to be eligible for certain post-independence welfare schemes.

²⁴ Baker, C.J., *The Politics of South India 1920-1937* (Cambridge: Cambridge University Press, 1976), Kumar, D., 'Caste and Landlessness in South India', *Comparative Studies in Society and History*, Vol. 4 (1962), 337-63.pp. 337-363. Jeffrey, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992)

Table 6.1: Composition of The Anthropometric Sample by Caste Group

	Number of Observations	% Sample
Brahmin	895	7
Christian	442	3
Dalit	1604	12
High Caste	852	6
Low Caste	4881	37
Muslim	1151	9
Tribal	705	5
Unclassified	2785	21
Total	13315	100

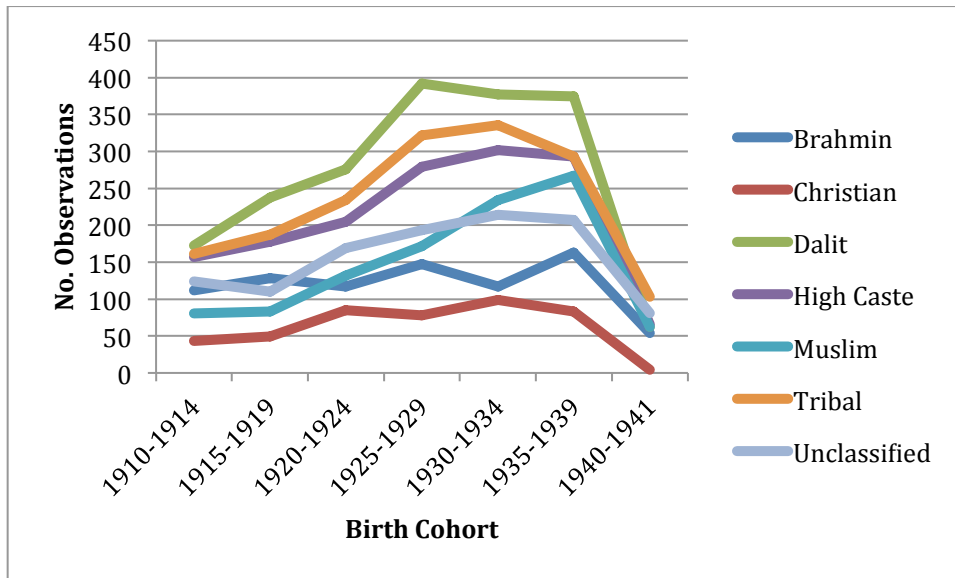
Source: *All India Anthropometric Survey: South Zone.*

One final consideration that could have a bearing on the quality and usefulness of the data is the potential selective mortality of some groups. There is a chance that higher mortality among shorter individuals could bias the data. As has already been mentioned it is now established that there is association between shorter stature higher and rates of mortality²⁵. In cohorts where height-selective mortality has occurred, there will be an overrepresentation of the longer-lived, taller, section of the population in older cohorts, biasing the mean height upwards. If this bias were present, higher stature of older cohorts would not indicate better biological standards of living. Rather it would show that the shorter people had already died. The very oldest cohorts have already been excluded because of the problem of shrinking in old age. However, it is

²⁵ Waaler, H., 'Height Weight and Mortality the Norwegian Experience', *Journal of International Medicine*, Vol. 215 (1984), 1-56. See also Higman, B., 'Growth in Afro-Caribbean Slave Populations', *American Journal of Physical Anthropology*, Vol. 50 (No. 3, 1979), 373-85. who finds the same phenomenon among Afro-Caribbean slaves in Trinidad

important to check whether height selective mortality has occurred in any of the birth cohorts in the remaining sample.

Figure 6.4: Composition of Sample by Caste Group and Birth Cohort



Source: *All India Anthropometric Survey: South Zone.*

Figure 6.4 above, shows the caste composition of the sample by birth year. Lower castes make up a large proportion of the sample, followed by the Dalits and Tribals and then by higher caste groups. It is reassuring that the relative size of the groups, within each time period is fairly constant. If there is height selective mortality in the sample, the stability of caste proportions by birth cohort indicates that it did not operate differentially by caste.

The full database used in this study also includes non-anthropometric data from other primary sources that may explain variations in mean height. First among these are the variables that relate to the three aspects of colonial policy under investigation. Geographical data on which regions were under direct or indirect rule was sought out. Finally information was collected from decadal railway maps on the number of railway stations per district per decade.

These maps did not include administrative boundaries and therefore each station was manually located within a district by pinpointing the station on modern maps and then identifying the historical district to which it belonged. Also included in the database are geographic controls, such as altitude, latitude and longitude, to help ensure that the effects of the colonial variables above are correctly identified and not merely a function of geography²⁶.

Early Twentieth Century South Indian Biological Living Standards in Context

All regions in the sample have relatively similar mean heights, the range being fairly narrow. For the whole period, the mean height by regions ranges from a low of 162.65cms in Kerala to 164.00cms in Karnataka. The most southerly regions, Kerala and Tamil Nadu, have the lowest mean heights compared with the two more northerly regions of Andhra Pradesh and Karnataka. The standard deviation of heights is also similar for each of the regions at between 6.03cms to 6.53cms. The descriptive statistics in Table 3.2 below do not reveal further significant results. Later in the chapter I turn to regression analysis to explore other patterns in the data.

²⁶ See Appendix 1 for a full list of variables in this study's database

Table 6.2: Descriptive Statistics of Anthropometric Database

Region	Mean Height by Birth Cohort (cms)				Standard Deviation of Height By Region
	All Birth Cohorts	1910-1920 Birth Cohort	1921-1930 Birth Cohort	1931-1941 Birth Cohort	
Andhra Pradesh State	163.36	163.24	163.82	163.01	6.10
Karnataka State	164.00	163.97	163.99	164.01	6.53
Kerala State	162.65	162.12	162.36	1632.9	6.39
Tamil Nadu State	162.94	163.02	163.00	162.82	6.03
All States	163.31	163.17	163.40	163.30	6.27

Source: *All India Anthropometric Survey: South Zone*. The first and last birth cohorts used here have 11 rather than 10 years because the dataset spans 32 birth years.

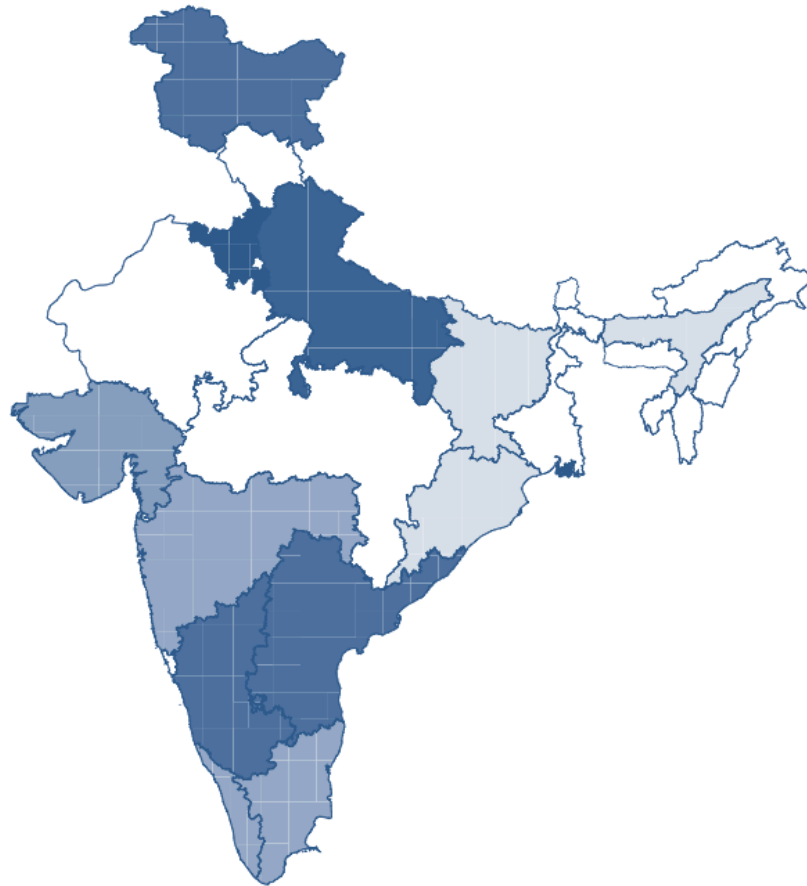
In the early twentieth century, Indian mean male heights were lower than almost all other every other country for which data exists save Indonesia. In India mean heights between 1910 and 1940 were around 163-4 cms in both the North and South of the country. In the same period, mean heights were 167cms in Kenya (1910) and 172cms in the USA (1910). Indonesians were very short at under 160cms (1910-1940) but Indians were not too far from this low mean stature in the early twentieth century. They were certainly nowhere near North American or even sub-Saharan mean heights²⁷.

²⁷ Moradi, A., 'Confronting Colonial Legacies: Lessons from Human Development in Ghana and Kenya, 1880-2000', *Journal of International Development*, Vol. 20 (No. 8, 2008), pp1107-21

This section will map patterns and lay out some of the economic and cultural aspects that could be influencing developments in the biological standard of living in South India in the last decades of colonialism. First, lower real wages in the South are explored as a possible reason for lower mean height in the region. In the second part of this section, the more severe nature of the southern caste system is investigated as a possible explanation. Finally, the different status of women in North and South India is explored in relation to its impact on the biological standard of living.

There are some clear geographical trends in the data. Average heights are higher in North Indian than in the South. The findings of this study are plotted in Figure 6.5 below, alongside with the results found by Guntupalli and Baten. The populations with the greatest mean heights are shown in the darkest shades of blue and are found in far North of the country. While those with the shortest mean heights are shown as pale blue and tend to be in the East. In the West and the South the mean heights are in between the two extremes. Over time, the gap between North and South intensified, illustrated in Figure 6.6 below.

Figure 6.5: Mean Height by State: 1910-1942

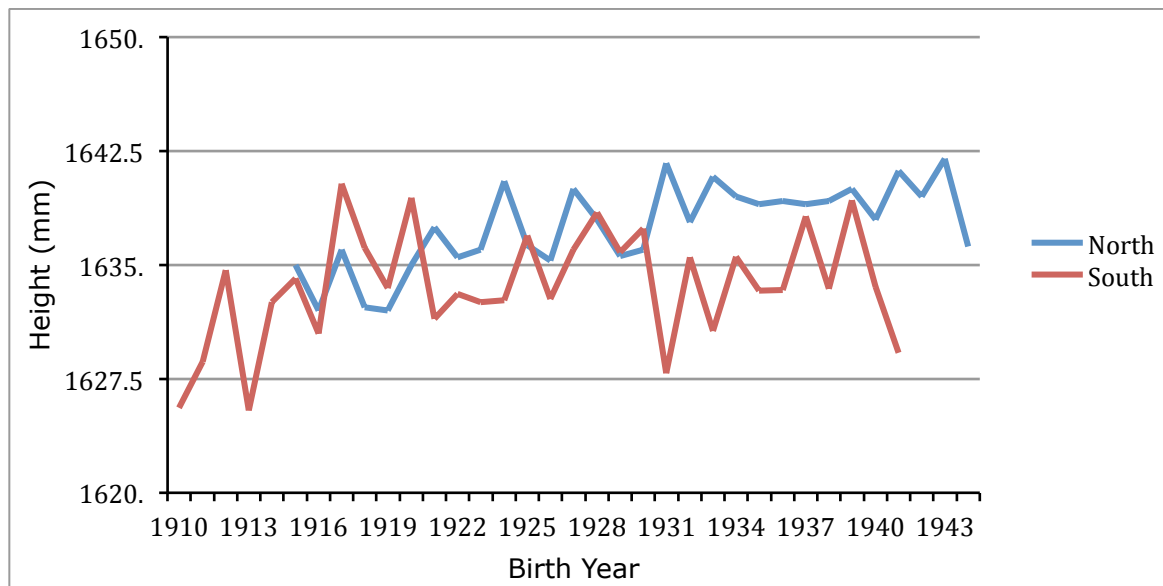


Sources: Data on the four southern most states are from this study while data on other parts of India are from Guntupalli and Baten (2006)²⁸. The Guntupalli and Baten data are of mean height by state 1915-1944 while the data from this study are for 1910-1942.

Mean Height, mms	Colour:
1660 and above	Darkest
1660 – 1650	
1650-1640	
1640-1630	
1630-1620	
1620 and below	Lightest

²⁸ Guntupalli and Baten, in 'Guntupalli, A. and Baten, J., 'The Development and Inequality of Heights in North, West, and East India 1915-1944 ', *Explorations in Economic History*, Vol. 43 (No. 4, 2006), pp578-608. use post independence administrative boundaries in their paper. In order to be able to plot my data with theirs I do the same in this. However, all the individuals recorded in the All India Anthropometric Survey were born when colonial British administrative boundaries were in place

Figure 6.6: Mean Heights in North and South India 1910-1945



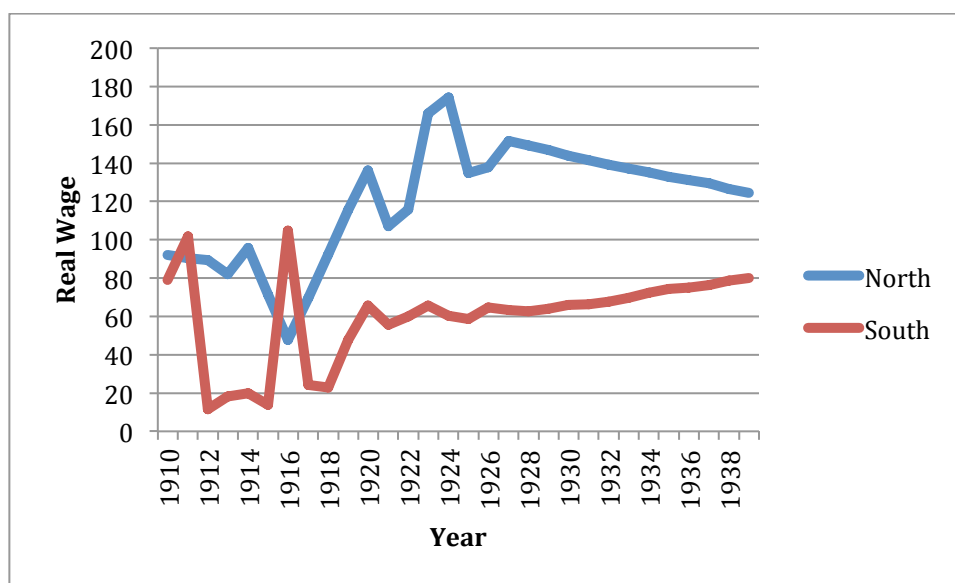
Sources: *All India Anthropometric Survey: South Zone*, and Guntupalli and Baten, 'Development and Inequality of Heights'. The two datasets cover slightly different periods because the data for the North zone was collected several years later than the southern data.

Although mean heights slowly increase, by between 0.5 and 1cm, in both North and South India in the inter war period, this improvement is very small. These data are consistent with the body of work by Brennen, McDonald and Shlomowitz, that biological standards of living in India over this period were essentially stagnant. Figure 6.6 above also shows the development of a height advantage by the North over the South of 0.5 to 1cm by the 1930s. Thus, South India had a fairly low biological standard of living compared with the Indian nation as a whole. The view that biological living standards were particularly low in South India is supported by reports that it was common in the region in the early twentieth century for inmates to gain weight in prison²⁹.

²⁹ This evidence from Travancore is cited in Jeffrey, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992), p203

What explains these findings? Figure 6.7 presents a real wage index drawn from Williamson, distinguishing the North from the South. Real wages were growing in South India in the 1920s and 1930s but they were only between 20 and 60 percent of the level of northern wages. Although it is hardly surprising for there to be regional heterogeneity in a country as large as India, this is a large difference in real wages with the South very much worse off than the North. In India, as is commonly found in other places, mean heights appear to be correlated with real wages. Lower wages in South India were associated with lower mean male heights when compared with the North which can be seen by comparing Figures 6.6 and 6.7³⁰.

Figure 6.7: Index of Real Wages in North and South India 1910-1938



Source: Williamson, J.G., 'Globalisation, Factor Prices and Living Standards in Asia Before 1940', pp.13-47, in Latham, A.J.H., and Kawakatsu, H., (eds.) *Asia Pacific Dynamism 1550-2000*, (Routledge, 2000).

³⁰See Steckel, R. and Floud, R., *Health and Welfare during Industrialization* (Chicago: University of Chicago Press, 1997) and Steckel, R., 'Height and Per Capita Income', *NBER Working Paper*, Vol. 880 (1982)

Explanations for this trend in wages vary. One argument is that bringing uncultivated land into agricultural production drove higher rates of economic growth in India in the nineteenth century. By the beginning of the twentieth century, the opportunities for such ‘extensive’ growth dwindled with the increasing scarcity of wasteland³¹. An alternative argument explaining the economic stagnation of the period centres on the institutions introduced by the British. The landlord system of land tenure had, in this view, entrenched economic power in the hands of a small number of landowners, making the agricultural economy in these areas sluggish and inflexible³². Further, there was a high rate of population growth after the 1920s, due to the combination of fairly high birth rates with lower mortality from famine and disease. This explosion in population eroded the impact on per capita incomes of what little economic expansion there was in the period. Madras fared slightly better than much of the rest of India, since net emigration, which continued into the early twentieth century, reduced the downward pressure of population growth on per capita incomes³³.

Despite the low levels of real wages, South India seems to have performed relatively well in terms of agricultural output over the period. Madras was second only to Punjab in rates of annual agricultural output growth. During the Depression prices of agricultural goods, the most important sector of the Indian economy, fell dramatically. For southern India this was a particularly serious

³¹ Roy, T., *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000), p115

³² Roy, T., *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000), p115

³³ Roy, T., *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000), p81

event, as the prices of rice and cotton, Southern staples, were some of the most volatile. Thus we see in Figure 6.7, above, that although real wages in India were flat during this time, they declined in the South reaching very low levels during the Depression years. In addition to the influence of international economic phenomena like the Depression, South India was also hit by a crop failure in 1918-19 which the North escaped, further eroding production in the region³⁴.

It is particularly impressive that parts of the North were able to achieve such relatively high levels of biological living standards, given the poor health conditions there in this period. One example is Punjab, one of the states with the tallest mean height in the early twentieth century. There, mean infant mortality (1891-1931), a measure very sensitive to health conditions, was over 210 per thousand while in the southern British Indian province of Madras it was under 160³⁵. The data point to a wider phenomenon that infant mortality in Southern India tended to be lower than in the North. Lower infant mortality in the South overlaps with the regions in which women had a more equal status in society.

Caste was a fundamental determinant of access to resources in India in this period and no study of historical living standards could exclude it from analysis. For Roy, the eminent historian of the Indian economy, aspects of culture, including caste, have been paid insufficient attention in studies of the Indian economy. He has recently stressed the “importance of restoring the links

³⁴ Arnold, D., 'Looting, Grain Riots, and Government Policy in South India', *Past and Present*, Vol. 84 (No. 1, 1979), p111

³⁵ Bideau, A., Desjardins, B., et al., *Infant and Child Mortality in the Past*, (Oxford: Clarendon Press, 1997), p124

between economic history and culture” in scholarship on India³⁶. This section will explore the influence of caste on the biological standard of living.

An ancient system, caste is mentioned in the form of *varna* in the Hindu scriptures. The four varnas range from the Brahmins at the top of the hierarchy to the warrior Kshatriyas, the merchant Vaishyas and down to the artisan-peasant Sudras who serve the other varnas³⁷. In addition there are the avarna, or Dalit groups who are classified as being without caste and historically treated as ‘untouchable’. Overlaying this fairly simple classification is the plethora of sub-castes or *jatis* often associated with specific traditional occupations such as water carrying or sweet making³⁸. Although in the late colonial period the British viewed the caste system as static, the status of different castes evolved over its long history and some caste groups have come into existence recently while others present in earlier centuries have vanished altogether³⁹. In practice the varna system of a five-tier hierarchy does not always correspond to the power and social position of all groups. In particular the relative status among the higher castes can be ambiguous where the Kshatriyas are the main landowners and are therefore in command of the most important source of

³⁶ Roy, T., *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000), p128

³⁷ For ancient descriptions of caste see Doniger, W. and Smith, B., *Laws of Manu* (Harmondsworth: Penguin, 1991). This was one of the sacred Hindu texts written between 200 BD and 200 AD. For an up to date study of caste and politics in India see Bayly, S., *Caste, Society and Politics in India: From the Eighteenth Century to the Modern Age* (Cambridge: Cambridge University Press, 1999)

³⁸ This is a very simplified introduction to a rich historical and anthropological literature. For an excellent introduction see I. Banerjee-Dube (ed.) *Caste in History* (New Delhi: Oxford University Press, 2012)

³⁹ Bayly, S., *Caste, Society and Politics in India: From the Eighteenth Century to the Modern Age* (Cambridge: Cambridge University Press, 1999), p25. Rather than acting merely as objective observers, the British inclination to categorize individuals on the basis of caste in India increased the significance of caste as a marker of identity during the colonial period. See also Kumar, D., 'Agrarian Relations: South India', in D. Kumar (ed.) (2vols., Cambridge: Cambridge University Press, 1983)

wealth. Nevertheless, the avarna were heavily discriminated against, particularly in South India and had very few opportunities for social mobility.

The caste system is present in most regions of India but there are important regional differences. In the South the groups were disproportionately placed at one end of the spectrum or the other; either high or low caste. While in the North, the distribution of status was more continuous. In addition, the practice of caste was not confined to Hindu groups; Muslims and Christians practiced caste like restrictions within their own religious communities that governed, for example, access to holy places⁴⁰. Still, within the Hindu caste system, South India is traditionally known as having the strictest hierarchy with a great number of restrictions on avarna groups. Some particularly low ranking castes were treated in parts of the region as unapproachable and unseeable meaning that even their presence or sight was polluting to higher castes. Furthermore, the Southern region has the highest proportion of avarnas in the population, so those restrictions affect a larger section of society⁴¹. More than 55 percent of the population of the Madras Presidency was classed as polluting in the 1901 census of which 31 percent were extremely polluting⁴². For example, the Pariya caste in South India, by far the largest Dalit caste in the Madras Presidency, was treated as untouchable by all caste Hindus and by some Dalit groups as well⁴³. They were not permitted to live in villages with other castes

⁴⁰ For example, the Syrian Christians of South India, the descendants of an ancient community of high status Christians in the subcontinent, protested strongly in the 1900s at the Church Missionary Society's attempts to include newly converted Christians from dalit castes in their congregations. See Jeffrey, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992), p21

⁴¹ Mahar, M., *Untouchables in Contemporary India* (Tuscon: Arazona University Press, 1972), p41.

⁴² Census of India 1901, Madras, Vol, XV pt1, p136

⁴³ The Tamil term 'Paraiya' or 'Paraiyan', the name of this caste, is the root word for the English term pariah, or outcaste

but had to live in a separate hamlet outside the village⁴⁴. In Travancore, Cochin and Malabar, caste rules and taboos were especially strict⁴⁵. Here there was a bewildering set of rules governing the allowed set of hairstyles, jewelry, clothing and behaviors for each caste⁴⁶. By the beginning of the twentieth, century some relaxation of these strictures had occurred but the caste system as a whole remained prominent in everyday life⁴⁷.

Dharma Kumar has compared the particular form of untouchability in South India with serfdom and slavery⁴⁸. These institutions are very different in many respects, not least in terms of the religious significance of untouchability in India, which did not apply to, say, serfdom in nineteenth century Russia. Nevertheless, an important similarity does exist in the sense that both serfs and many South Indian Dalit groups had little or no control over their own labour. Furthermore, the tendency towards the unfreedom of Dalits increases the further South one goes⁴⁹. Slavery of Dalits was so widespread in the nineteenth

⁴⁴ See Gough, K., 'Caste in a Tanjore Village', in E. Leach (ed.) *Aspects of Caste in South India, Ceylon and North-West Pakistan* (Cambridge: Cambridge University Press, 1960)

⁴⁵ J Jeffrey, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London: MacMillan, 1992), p19-20

⁴⁶ A famous example was the interdiction against any member of a low caste wearing clothing above the waist, whether male or female. By the mid-nineteenth century many formerly low caste people were converting to Christianity and changing their dress accordingly. This provoked social unrest in Travancore in the mid nineteenth century when one day in 1858, a high caste woman attacked a low caste, Christian woman for wearing what to them appeared to be high caste dress. Riots broke out, Christian missions and homes were burned and school was suspended for two months. Kawashima, K., *Missionaries and a Hindu State: Travancore 1858-1936*, (New Delhi: Oxford University Press, 1998), p60-1

⁴⁷ Roy, T., *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000), p116

⁴⁸ Kumar, D., 'Caste and Landlessness in South India', *Comparative Studies in Society and History*, Vol. 4 (1962), p344

⁴⁹ *Idem*. In parts of South India in the period preceding that with which we are concerned here, untouchability seems to have been closer to slavery than serfdom. For example, Kumar quotes prices paid in the sale of Dalits in North and South Malabar in the early nineteenth century

century that even the British administration in Madras owned South Indian slaves on some of its plantations in Malabar⁵⁰.

There was a strong association between caste and class in this period, although this relationship began to gradually break down in the twentieth century⁵¹. One reason for this is the religious interdictions against certain castes performing some activities, for example Brahmins were traditionally barred from tilling the soil⁵². This meant that although Brahmins tended to own land, they could not cultivate it themselves, had they wanted to. Instead, Brahmins tended to work as priests under the patronage of rich landowners, or they were landowners themselves. The size of this group at the top of the scale of ritual purity was, however, very small. The 1931 Census reports that Brahmins make up 9% of the total population and less than 3% of the populations of Tamil Nadu and Andhra Pradesh⁵³.

The economic position of such high status groups became more unstable during the Depression. The proportion of land in South India held by Brahmins and other noble groups declined over the period. However, Yanagisawa indicates that this was not an indication of a more equal distribution of resources in inter-war India. Rather, excluding Brahmins, land inequality probably increased⁵⁴. It is the middle and middle-upper castes that seem to have been in the best position to exploit the economic opportunities in Depression era South India. For example, there is qualitative evidence attesting to the upward

⁵⁰ Kumar, D., *Land and Caste in South India* (Cambridge: Cambridge University Press, 1965), p68

⁵¹ Roy, T., *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000), p79

⁵² Srinivas, M., 'The Changing Position of Indian Women', *Man*, Vol. 12 (No. 2, 1977), p224-9.

⁵³ *Census of India, 1931*, Vol. 1, Part II, p534-5

⁵⁴ Yanagisawa, H., *A Century of Change: Caste and Irrigated Lands in Tamil Nadu 1860s-1970s* (New Delhi: Manohar, 1996), p163

mobility of middle ranking groups, such as the Tamil Nadu Vellalas, who had access both to land and to credit and, unlike higher caste groups, were willing to cultivate the land themselves.

Another way in which the position of high castes groups was becoming more insecure in inter-war South India was the increasing political movements by non-Brahmin, self-respect movements and the Justice Party against high caste advantages. The high caste privileges targeted by such movements included the overrepresentation of Brahmins in prestigious civil service jobs and in secondary and further education. For instance, although Brahmins formed less than 10 percent of the population in the Madras Presidency, throughout the period they had around half of the desirable, Gazetted provincial government posts⁵⁵. One area in which these agitations seem to have had an effect is in increased non-Brahmin representation amongst high court judges. Once another field of Brahmin monopoly, by the early 1930s a majority of judges were non-Brahmin⁵⁶. In the qualitative descriptions of these changes in the power of high caste groups, it is difficult to get a sense of the magnitude and extent of the transformations. If these changes were reflected in the biological standard of living one would expect the middle and higher castes' mean heights to converge with that of the Brahmins. However, it is also possible that the evidence described refers only a small proportion of the population of these groups and left the hierarchy of biological standards relatively unchanged.

⁵⁵ See Baker, C.J., *The Politics of South India 1920-1937* (Cambridge: Cambridge University Press, 1976), p46-7

⁵⁶ *Ibid*, p64

Table 6.3: Structure of Male Workforce in 1911 (Percentages)

Sector	India 1911	Madras 1911	Mysore 1911
Cultivators	53.5	51	50.8
Agricultural Labourers	15.4	18.1	16.1
Livestock, forestry, fishing, hunting	4.9	4.2	5.4
Mining and Quarrying	0.2	-	0.7
Manufacturing	9.1	9.4	8.9
Construction	1.3	2.6	1.4
Trade and Commerce	5.5	5.8	5.4
Transport, Storage and Communications	1.7	1.6	0.9
Other Services	8.3	7.3	9.2

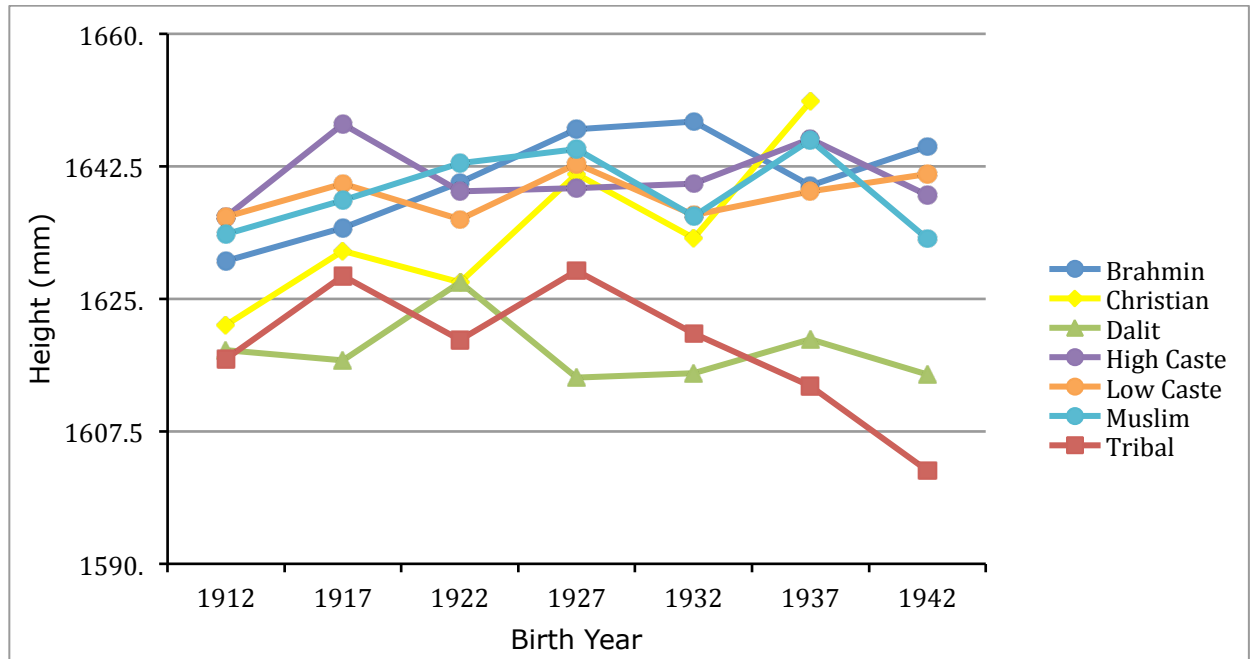
Source: Adapted from Krishnamurty, 'Occupational Structure' in Kumar, D., and Desai, M., (eds.), *The Cambridge Economic History of India*, (Cambridge, 1983), p534-42.

At the opposite end of the ritual hierarchy, Dalit groups were overwhelmingly landless laborers. In the far South, it was sufficiently unusual for a member of an Dalit caste to own land that each individual incidence was recorded by the administration as a curiosity⁵⁷. The economic disadvantage of Dalits was compounded by their very low levels of literacy, which narrowed the opportunities for non-agrarian employment and reinforced their low ritual status. This issue is explored further in the education section below. The higher castes tended to be in the service industries or rentiers, those in the middle were traders, artisans or small landowners and the low castes were labourers. For instance, the groups listed in Table 6.3 above as agricultural labourers would

⁵⁷ Kumar, D., *Land and Caste in South India* (Cambridge: Cambridge University Press, 1965).p66.

have been overwhelmingly Dalit caste and the livestock, forestry, fishing and hunting group is likely to be made up of a large proportion of tribal people⁵⁸.

Figure 6.8: Changes in Height over Time in South India by Caste and Religion
1912-1942



Source: *All India Anthropometric Survey: South Zone*. There is no data presented for mean height of the Christian group in 1942 because the number of observations was insufficient.

Figure 6.8 shows the mean heights of each of the caste and religious groups over time. In South India at this time it is the heights of upper caste Hindus, Muslims and Christians increased while the heights of the Tribal and Dalit groups stagnated or declined. Thus a widening gap in stature opened up in the inter war period between those at the very bottom of the South Indian social ladder and the other, better off, sections of society.

Guntupalli and Baten note that for Northern India the height gap between high and low castes was smaller than they had anticipated given the inequality

⁵⁸ Guha, R. and Gadgil, M., 'State Forestry and Social Conflict in British India', *Past and Present*, Vol. 123 (No. 1, 1989), pp141-77

in resources associated with the caste system. It is surprising that the height gap between the high caste and low caste groups was of a similar order of magnitude at under 7cms in both the North and the South⁵⁹. One might have expected that the more extreme South Indian caste system would be reflected in a greater inequality of mean height between the caste groups. It could be that caste again provides part of an answer. Brahmins and other higher castes concerned with maintaining ritual purity practiced vegetarianism. Other authors have suggested that this led to nutritional imbalances among the high castes, in particular a deficiency of protein. Guntupalli and Baten suggest that protein deficiency may have negatively affected the height of high caste and Brahmin groups, which could be one explanation for the unexpectedly low levels of inequality in Indian stature for such a hierarchical society⁶⁰. In this way the caste system, through restrictions on diet, may have naturally undermined the extent of biological inequality in the population. So the strictness of the Southern system may have had a downward influence on both high and low status groups which would explain both the lower mean height together with the same height gap as was found in the North between high and low castes.

⁵⁹ These figures exclude the exceptionally tall Northern Sikhs for whom there is no obvious comparator in the South. If the Sikhs are included then the range in height in the North becomes even larger in relation to the South

⁶⁰ Guntupalli, A. and Baten, J., 'The Development and Inequality of Heights in North, West, and East India 1915-1944', *Explorations in Economic History*, Vol. 43 (No. 4, 2006), p597

Table 6.4: The Impact of Caste on Stature in Southern India 1910-1941 Birth Cohorts

Dependent variable – Height (mm)

	Specification 1	Specification 2 – Regional controls
Constant	1405.362***	1416.085***
Year born	0.118*	0.113*
Caste:		
Brahmin	9.284***	9.960***
Christian	1.354	1.498
Dalit	-14.127***	-14.151***
High Caste	7.241***	7.273***
Low Caste	Reference	Reference
Muslim	8.297***	8.298***
Tribal	-1.997	-1.962
Unclassified Caste	-0.985	-0.931
Region:		
Hyderabad	-	-0.546
Travancore	-	-8.148***
Cochin	-	-0.054
Mysore	-	5.702***
British India	-	Reference
Population Density		-0.001***
Number of Observations	13,315	13,315

In this and all forthcoming regression results tables the following notation is used: * = significant at the 10% level, ** = significant at the 5% level, *** = significant at the 1% level. All regressions are OLS.

In the regression results presented in Table 6.4 above, the constant term refers in Specification 1 to the low caste group because this is the reference group of the caste dummy variables. In Specification 2 with regional controls, the constant refers to the low caste group in British India. The positive and significant coefficient of around 0.1 on the 'year born' variable shows that there is a small but significant upward trend in mean heights in South India in the inter war period. Guntupalli's data show that in the North there is a consistent, if slow, increase in height across almost all of the caste groups including low and high status Hindus and other religious groups. The South Indian data studied here, however, show that in this region the general upward trend in heights is not experienced by all caste groups. The regression results provide more precise evidence on the height deficit experienced by groups of low caste, and the height advantage of high caste groups. All the results shown are height estimates by caste relative to the low caste group. Thus the Dalit group is on average 1.4 cms. shorter than the Low Caste group while Brahmins are 0.9 cms. taller and High Castes are 0.7cms. taller. Muslims are also statistically significantly taller than the Low Caste group, by 0.8cms.

The importance of caste in determining height is robust to the inclusion of regional controls in Specification 2. This indicates that the caste effect is not being driven by trends in specific parts of the southern region, but is a general region-wide effect. In addition, the effects are not influenced by population density, since the coefficient on this variable is practically zero. This implies that height does not vary with urbanization. Specification 2 shows that some of the States have average heights that are significantly different from British India,

Travancore and Mysore, while the two others, Cochin and Hyderabad, do not. Compared to British India, mean height of men is significantly lower in Travancore while it is higher in Mysore.

Understanding Inequality

Why is the gap between the stature of high and low status groups increasing, leaving the Dalit and Tribal people so short relative to other groups? Low caste groups do not only become physically shorter relative to other castes. Data on land ownership in the Madras Presidency also indicates that “growing market opportunities helped to increase the wealth of groups already landed and rich” while the Dalits and Tribals were left out⁶¹. The next part of this section is devoted to investigating the poor biological standards of living of Dalit and Tribal people. First the impact of Imperial forest policy on tribal people is investigated. Second, geographical explanations are assessed for the poor living standards of Dalits.

From the results presented Figure 6.8, the decline in the height of the Tribal people is the most extreme trend out of all the South Indian caste and religious groups. An explanation of this phenomenon may lie in the environmental history of the period⁶². In the late nineteenth century, the British Indian government announced formal rights of ownership in the name of the Forest Department over twenty percent of the area ruled directly by the British. Many of these lands had previously been managed jointly by groups of

⁶¹ Washbrook, D., 'Country Politics: Madras 1880 to 1930', *Modern Asian Studies*, Vol. 7 (No. 3, 1973), p488

⁶² Indian environmental history is a new and growing subdiscipline of economic history for a good overview see Arnold, D. and Guha, R., *Nature, Culture and Imperialism: Essays on the Environmental History of South Asia* (New Delhi: Oxford University Press, 1995)

villagers⁶³. Even in forested areas not reserved in this way, the formalisation of property rights by the British in the name either of cultivators or landlords ignored many traditional structures, as Roy puts it: “The legal recognition of a property right... went along with the erosion of many customary rights over usage of land or what it produced. These customary rights were poorly understood, oversimplified or irreconcilable with private property rights; for example, the rights to the use of common lands were the victims of this confusion.”⁶⁴. The move to reservation was motivated by the government’s desire to secure its share in the profitable export trade in exotic woods such as teak, sandalwood and other forest products. It was also motivated by the desire to secure supplies of timber to produce sleepers for the expanding railway network. By the end of the nineteenth century the demand for railway sleepers had grown to more than 1,000,000 per annum.

Announcing ownership by the government of a substantial portion of Indian forests led to an increase in the amount of forested land in India⁶⁵. However, it also had the corollary of denying many traditional forms of forest-based activities of Indian people, especially tribal peoples. Restrictions were introduced on access to fodder, fuel and timber and the right of cultivators to use traditional slash and burn agriculture. This led to constant complaints by

⁶³ Roy, T., *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000).p102

⁶⁴ *Ibid*, p112. The effectiveness of many traditional land tenure systems in sustainably managing land has been investigated by Nobel Prize winning economist Elinor Ostrom. See Ostrom, E., *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 1990)

⁶⁵ Roy, T., *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000), p109. The increase in forested area is a result of the economic incentive to produce more resources for sale and export, but also the consequence of increasing social pressures for conservation

affected communities to the British authorities. An example is an 1893 petition from a tribal group to the British Indian Government quoted below:

We daily starve, having had no food grain in our possession. The only wealth we possess is our axe. We have no clothes to cover our body with, but we pass cold nights by the fireside. We are now dying for want of food. We cannot go elsewhere, as the British government is every-where. What fault have we done that the government does not take care of us? Prisoners are supplied with ample food in jail. A cultivator of the grass is not deprived of his holding, but the Government does not give us our right who have lived here for generations past.⁶⁶

Denial of the customary property rights of tribal people to the use of forestland surely, as the quote suggests, affected the capacity of these groups to sustain themselves. Given the substantial forested areas in the South, many of which contained teak and other highly-valued timber species, it is perhaps not surprising after all that Southern tribal people's heights decline, while the effect in other regions of the country was either weaker or totally offset by other trends.

⁶⁶ Cited in Guha, R. and Gadgil, M., 'State Forestry and Social Conflict in British India', *Past and Present*, Vol. 123 (No. 1, 1989), p154

Table 6.5: Forest Revenues in Regions of India 1919-20

Province	Area of Province (Sq. Miles)	Forested Area (Sq. Miles)	Reserved Forest (Sq. Miles)	Proportion of Forests Reserved (%)	Output of Timber and Fuel (Cubic Feet)	Net Revenue (£)
Assam	48,954	21,882	5,648	25.8	14,184,000	43,992
Bengal	78,668	10,620	4,891	46.1	22,477,000	71,929
Bihar and Orissa	82,578	2,972	1,747	58.8	20,574,000	20,711
Bombay	123,218	12,568	12,090	96.2	44,755,000	169,387
Burma	226,911	145,223	29,874	20.6	100,940,000	659,804
Central Provinces and Berar	99,948	19,689	19,645	99.8	35,562,000	144,700
Punjab	96,650	6,766	2,102	31.0	35,240,000	95,317
Madras	142,263	19,348	18,794	97.1	26,220,000	169,387

Source: Statistical Abstract Relating to British India from 1910-11 to 1919-20, His Majesty's Stationary Office, 1922, p137.

Furthermore, as Table 6.5 shows, Madras was one of the few Indian provinces with more than 90 percent of its forests reserved. This implies an unusually high level of government restriction on access to forests in Madras. Guntupalli and Baten's results from the North, which included many regions with a much lower rate of forest reservation, do not show a decline in the heights of tribal people. While in the Southern data, the decline in the biological standard of living of tribal people is dramatic. In this way, the extent of government activity in Indian forests may help explain temporal trends, as well as regional differences.

Among the traditional rights that were curtailed by the British in the late colonial period was the right to graze cattle, which was either prohibited entirely in forested lands or possibly only on the payment of a fee. Koepke and Baten find that over the past two millennia, Northern Europeans were taller than other regions of the continent partly because of their diet. Using the frequency with which bones of cattle are found at archeological sites as a proxy for milk consumption, they argue that a higher density of cattle rearing, and the correspondingly plentiful supply of milk in Northern Europe is a likely explanation for at least some of this difference in stature⁶⁷. The importance of protein for achieving tall mean stature is a finding that comes out of other anthropometric work on nineteenth century North American plains Indians who had access to large herds of wild bison. The culture of the Plains Indians was also highly egalitarian which probably also contributed to greater mean stature for reasons explained, above⁶⁸. A consensus has developed that in pre and early industrial societies, groups living in low population densities with access to good quality protein, tended to be taller⁶⁹. With the increasing incursion by the British Indian government into isolated areas, sparsely populated with tribal peoples, their net nutritional level declined and it is likely that the restrictions on cattle grazing in forested areas contributed to this decline. The mean height of Tribals in South India falls from around 1620 mm in 1912 to close to 1600mm in 1942.

⁶⁷ See Koepke, N. and Baten, J., 'The Biological Standard of Living in Europe during the Last Two Millennia', *European Review of Economic History*, Vol. 9 (No. 1, 2005), pp61-95

⁶⁸ Steckel, R. and Prince, J., 'Tallest in the World: Native Americans of the Great Plains in the Nineteenth Century', *American Economic Review*, Vol. 91 (No. 1, 2001), p291

⁶⁹ Komlos, J., 'Access to Food and the Biological Standard of Living: Perspective on the Nutritional Status of Native Americans', *American Economic Review*, Vol. 93 (No. 5, 2003), p252

While tribal people relied on access to forest resources for their survival, a different geographical feature was important for Dalits: agricultural productivity and rainfall. In the drier, Northern, Telegu areas Dalit labourers had been largely emancipated even before the British arrived. However in the wetter and more fertile, Malabar and coastal Tamil regions unfreedom persisted for centuries longer⁷⁰. In these regions, Dalits did not have control over their own labour; when land was sold, they would work on the same plot for the new owner. In addition, they could be caught and returned to the landowner if they ran away and they could be traded and mortgaged in some areas even beyond the end of the nineteenth century⁷¹. It is possible that slavery persisted in more agriculturally productive regions because the greater intensity of farming generated a greater incentive for landowners to secure their access to plentiful labour.

It has long been recognized that there is a geographical overlap of areas in South India with particularly repressive caste structures and areas with high rainfall⁷². The Malabar Coast, for example, has one of the highest rates of annual rainfall in India and was also one of the areas in which the most repressive caste traditions of unseeability and unapproachability were practiced as well as the more common untouchability. There is a very high correlation in India between rainfall and rice output. Thus rigid caste structures are found in areas where

⁷⁰ Kumar, D., *Land and Caste in South India* (Cambridge: Cambridge University Press, 1965), p64

⁷¹ *Ibid*, p75. See also Kumar, D., 'Colonialism, Bondage, and Caste in British India', in M. Klein (ed.) *Breaking the Chains: Slavery, Bondage, and Emancipation in Modern Africa and Asia* (Madison: University of Wisconsin Press, 1993)

⁷² Examples include unseeability, practiced in the British Indian district of Malabar and the Princely States of Travancore and Cochin, under which certain castes were considered so polluting that upper caste Hindus could not see them without becoming polluted. As a result these castes were even more isolated than other dalit groups. The link between rainfall and dalit prejudice is made in, for example, Dharma Kumar's *Land and Caste in South India* (Cambridge: Cambridge University Press, 1965)

rainfall is sufficient to support a large rice crop⁷³. It would perhaps be anticipated that in regions where Dalits are also treated as unseeable and unapproachable, their economic and other opportunities would be even more severely constrained, and therefore their biological standard of living would be lower.

Table 6.6: Effects of Caste and Rainfall on Stature in South India 1910-1942

Dependent variable – Height (mm)

	Specification 1 –with Geographical Controls	Specification 2 –with Geographical and Caste*Rainfall interactions terms
Constant	1423.808***	1421.885***
Year born	0.104	0.106*
Brahmin	9.810***	9.432***
Christian	0.109	0.225
Dalit	-14.091***	-12.411***
High Caste	7.372***	7.178***
Low Caste	Reference	Reference
Muslim	8.133***	7.696***
Tribal	-1.925	-1.214
Unclassified Caste	-1.500	-1.251
Hyderabad	-1.300	-1.489
Travancore	-7.661***	-7.490***
Cochin	-0.096	0.288
Mysore	4.266**	4.668**
Population Density	0.000**	-0.001**

⁷³ Guntupalli, A. and Moradi, A., 'Gender Dimorphism: Discrimination in Rural India, 1930-1975', in M. Pal, P. Bharati, et al. (ed.) *Gender Bias: Health, Nutrition and Work* (New Delhi: Oxford University Press, 2009), p274

Altitude	0.006***	0.006***
Latitude	0.014	0.013
Longitude	0.040	0.036
Coast Dummy	-0.214	-0.360
Malaria	0.874	0.951
Rainfall	-0.032***	0.031***
Rainfall*Brahmin	-	0.026*
Rainfall* Low Caste	-	0.012
Rainfall*Dalit	-	-0.116***
Rainfall*High Caste	-	0.050***
Rainfall*Tribal	-	-0.102***
Rainfall* Muslim	-	0.028**
Number of Observations	13315	13315

Sources: Altitude, Latitude and Longitude data are sourced from the online cartographic database at: http://ipl.econ.duke.edu/dthomas/dev_data/datafiles/india_agric_climate.htm The rainfall variable is modern rainfall by district using government of India data found at: <http://www.imd.gov.in/section/hydro/distrainfall/>. Malaria data is also modern which may be part of the reason why it is never significant. This data was sourced from: <http://www.map.ox.ac.uk/>.

In the regression results reported above in Table 6.6 the constant term in all the specifications refers to the Low Caste group in British India. In Specification 1 in Table 6.6 height is regressed on caste but also on the geographical variables, altitude, latitude, longitude, whether a district is coastal, the modern incidence of malaria and rainfall. These geographical variables are included in order to see if they have an impact on mean height of the population as a whole or on the mean height of particular caste groups. Rainfall is of particular interest because agricultural yields are so closely tied to the supply of water. Indeed, water was so crucial to farmers' success that there were

frequently feuds and fights in the region over access to supplies of water⁷⁴. Empirical support for this comes from a finding in Moradi and Guntupalli where monsoon rainfall is found to explain 53 percent of the variation in growth of rice output in seven Indian states 1930-1975⁷⁵. Thus, areas with higher rainfall are likely to be more agriculturally productive, to produce more rice, and to have the capacity to support a larger population of non-agriculturalists and high castes. Specification 3 includes interaction variables to test the effect of different rainfall patterns on the heights of the various caste groups. The coefficients on these interaction variables represent the particular impact of rainfall on the mean height of each caste group. While Guntupalli has investigated the link between rainfall and the change in female relative to male heights, to the author's knowledge there have been no prior quantitative studies of the link between mean stature by caste and rainfall. The results of this study show that living in a region with more rain is beneficial to the mean height of Brahmin and High Caste groups, and detrimental for the Tribal and Dalit groups. Living in an area with 10mm more rain, is associated with an increase in the mean height of High Castes of 0.5mm and a decrease for Dalits of 1mm. So more fertile areas seem to have higher castes with a better biological standard of living while that of the lower castes is worse.

⁷⁴ Baker, C.J., *The Politics of South India 1920-1937* (Cambridge: Cambridge University Press, 1976), p211

⁷⁵ Guntupalli, A. and Moradi, A., 'Gender Dimorphism: Discrimination in Rural India, 1930-1975', in M. Pal, P. Bharati, et al. (ed.) *Gender Bias: Health, Nutrition and Work* (New Delhi: Oxford University Press, 2009), p274.

In North India, it seems that even the effect of the 1918-19 global influenza epidemic was mediated by caste⁷⁶. The epidemic was particularly devastating in India, with 6.2% of the Indian population carried off by the disease⁷⁷. Using year dummies for the period of the epidemic, Guntupalli and Baten find that it was the middle and higher castes born during the epidemic whose height suffered the most. They argue that the middle and higher castes were more vulnerable to the disease because they were more geographically mobile and tended to have professions that involved interacting with many different people, such as traders for example. By contrast, the epidemic seems to have had little impact on height in South India. The dummy variables (not shown here) corresponding to the influenza years are never statistically significant for any caste group. Therefore, influenza seems to have had no influence on the relative position of caste groups in terms of mean stature in the South.

While caste prejudice was stronger in the South than the North, there was much less traditional prejudice against women in this region. In this part of the country a more liberal social environment with respect to gender fed into more positive attitudes towards female education. Since records began, the south has had higher female literacy than all the other Indian regions⁷⁸. The historical reasons for this regional trend in India are still fairly murky. Some authors have drawn attention to high status matrilineal castes such as the Nairs, of the Malabar Coast region and to the matrilineal royal families of the Princely States

⁷⁶ There is a literature on the impact of the influenza epidemic in India. For an introduction see Klein, I., 'Death in India, 1871-1921', *Journal of Asian Studies*, Vol. 32 (No. 4, 1973), p643

⁷⁷ Guntupalli, A., 'Anthropometric Evidence of Indian Welfare and Inequality in the 20th Century', [Online], 2007, 18th February 2015. Available from: <<http://tobias-lib.uni-tuebingen.de/volltexte/2007/3023/>>, p58

⁷⁸ Jeffry, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992), p56

of Travancore and Cochin⁷⁹. These castes were traditional landowners and although the senior male was the family head, daughters would remain living in the family home after marriage and property was inherited through the female line⁸⁰. It seems that these matrilineal practices filtered down to other lower status caste groups who emulated the Nairs in an attempt to improve their ritual status. This practice of taking on social norms of higher castes as a route to upward social mobility is known as 'sanskritisation'. In this way, some degree of mobility was possible within the caste system but this generally had the effect of individual castes changing their position in the hierarchy rather than the hierarchy itself being changed⁸¹.

While there were some high status castes in the South in which females had relatively high status, more patriarchal gender norms were also practiced by other high status groups, particularly in regions that would become Andhra Pradesh and parts of Tamil Nadu. A common practice that signaled high ritual status in more patriarchal regions was for girls to be married very young, sometimes before the age of 5 or 6. Although, in some contexts, marriage would not immediately involve living in the same house as the new husband, more restrictions were placed on the girl's activities and freedom of movement,

⁷⁹ Ramusack, B., *Indian Princes and their States* (Cambridge: Cambridge University Press, 2004).p133. In most Princely States, except the birth of a male heir would occasion huge celebrations and the distribution of sweets while the birth of a girl would go almost unnoticed. While in Travancore and Cochin babies of both genders would receive a similar reception. On the kinship system of the Nair caste see Jeffry, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992), p35-39

⁸⁰ The Nairs have drawn particular anthropological attention because of their unusual sexual mores. Marriage was a flexible and informal institution that could be dissolved easily by the Nair women placing her former husband's sleeping mat outside of the home. A Nair woman could have more than one sexual relationship at one time and the offspring would be brought up within the maternal household. For an example of the extensive anthropological literature on this caste see Fuller, C., 'The Internal Structure of the Nair Caste', *Journal of Anthropological Research*, Vol. 31 (No. 4, 1975), p283-312

⁸¹ Srinivas, *Social Change in Modern India*, (Berkeley, 1966), p 93. See also Sen and Dreze, 'India: Economic Development', (Oxford, 1995), p177

making school attendance, for example, more difficult. This is borne out in the age of marriage data in Table 6.7 below. The mean age of marriage for females is higher, at over 17, in Travancore than in any other region⁸². In Madras it is fairly low at just over 15, while in Bihar and Orissa most girls were married before the age of 12 or 13 in the early twentieth century.

Table 6.7: Mean Age At Marriage of Females in Indian Regions 1901-1941

	Bihar and Orissa	Bengal	Punjab	Madras	Hyderabad	Mysore	Travancore
1901	11.41	11.41	15.04	15.25	12.18	15.14	17.37
1911	11.58	11.68	14.64	15.08	10.80	15.21	17.74
1921	12.48	12.27	15.12	15.31	11.22	15.22	17.21
1931	11.23	10.71	15.16	14.92	10.45	14.55	17.60
1941	13.42	13.24	15.43	16.13	11.90	16.17	-

Source: Adapted from Agarwala, 'Age at Marriage', *Population Index*, 23, 1957, p104.

Since women tend to be primary givers of child care, the more agency females have the more likely they are to ensure good health, nutrition and living conditions for their children which would, in turn, reduce the risk of stunting. One aspect of agency, maternal literacy is consistently associated with improved indices of child health. In a modern study of India, maternal literacy is associated

⁸² Over the late nineteenth and early twentieth centuries, legislation was introduced in both British India and some Princely States to introduce a minimum age of marriage with the focus particularly on addressing child marriage of females. However, in this field again, some Princely States showed stronger support for this kind of legislation than did the British administration. In 1894 Mysore prohibited the marriage of all Hindu girls below the age of 8. The important aspect of this legislation was its enforcement which was much more enthusiastic than that of the Government of India in relation to its own 1891 Age of Consent law with similar provisions. See Ramusack, B., *The Indian Princes and Their States*, 1st ed. Cambridge: Cambridge University Press, 2003, p175. For details of the British law 1891 Age of Consent Act and its enforcement see Engles, 'The Age of Consent Act', *South Asia Research*, 1983, 3, pp107-131

with more effective use of health facilities and reduced risk of stunted or underweight children⁸³.

Mean age of marriage of females is not, however, a good measure of female agency for the purposes of regressions because it is complicated by other social factors. Lower age of female marriage is associated with high caste status. Therefore, including mean age of female marriage in a regression risks confusing the impact of caste status and female status. Finding an effective quantitative measure of female agency would be useful for anthropometric studies of India in this period. Since there is widespread acceptance that the social norms affecting women's agency vary dramatically between the far South and the far North of India, it is possible that these differences have an important difference on the biological standard of living of the population as a whole. Sen and Osmani provide evidence for this in modern India. They argue that "women's deprivation in terms of nutrition and healthcare rebounds on the society in the form of ill-health of their offspring – males and females alike"⁸⁴. It is likely that these factors are influencing the trends in mean stature reported here but so far it is has not been possible to quantify the influence of female agency and deprivation on mean height.

Just as the status of women varied widely across India, so did the kinship mores governing marriage. It is possible that the distinctive kinship patterns of South India could have contributed to the comparative gender equality of the

⁸³ Borooah, V., 'Maternal Literacy and Child Malnutrition in India ', in M. Pal, P. Bharati, et al. (ed.) *Gender and Discrimination: Health, Nutritional Status and Role of Women in India* (Oxford: Oxford University Press, 2009) ,p160

⁸⁴ Sen, A. and Osmani, S., 'The Hidden Penalties of Gender Inequality: Fetal Origins of Ill-Health', *Economics and Human Biology*, Vol. 1 (No. 1, 2003), p106

region. South India currently contains the area with the most consanguineous marriages of anywhere in the world; namely Pondicherry in modern Tamil Nadu where 54.9 percent of marriages are consanguineous⁸⁵. South India is unusual in that in most of the country Muslims are the foremost practitioners of consanguineous marriages while in the South the practice is more popular among Hindus who have preference for uncle-niece or cross cousin marriage. The prevalence of consanguinity in South India has been attributed to the family's desire to keep control of ancestral lands and for the reduced demands of dowries by close family members⁸⁶. Whatever the reason for the adoption of consanguineous marriage practices in Southern India, it is likely that they exert a positive influence on gender equality. Since South Indian families tend to live in a small geographical area, whether a newly married couple live in the maternal or paternal family home, the wife will be close to her parents' home which provides continuity of social support structures after marriage⁸⁷. If husband and wife are related, then the husband's family may have a closer interest in the wife's wellbeing than in contexts, such as in the North, in which the new wife is frequently a stranger. Although social factors may indicate that consanguineous marriages would be beneficial to women's' welfare, research in medical science

⁸⁵ Consanguinity is defined as a union between people who are either second cousins or more closely relate. See Bittles, A.H., 'Consanguinity and its Relevance to Clinical Genetics', *Clinical Genetics*, Vol. 60 (2001), p90

⁸⁶ Iyer, S., 'Gender, Religion and the Age at Marriage in India', in M. Pal, P. Bharati, et al. (ed.) *Gender and Discrimination: Health, Nutritional Status and Role of Women in India* (New Delhi: Oxford University Press, 2009),p86-7

⁸⁷ Dyson, T. and Moore, M., 'On Kinship Structure, Female Autonomy, and Demographic Behavior in India ', *Population and Development Review*, Vol. 9 (No. 1, 1983), 35-60. By contrast, in the North there is a preference for marriages between members of different villages. The new wife will move into the household of the husband. This often leads her to being at some distance from family and friendship networks, which leaves her fewer avenues for emotional, financial and practical support. Ram makes similar arguments in her work on the women of the Mukkuvar caste in Tamil Nadu who follow the South Indian kinship system. *South Indian Fishing Community* (Sydney: Allen and Unwin, 1991).p79-80

has outlined some of the costs. Consanguineous marriages are associated with lower average birth size of offspring. Although the precise relationship between mean adult height and consanguineous marriages is yet to be quantified, the existing evidence suggests that consanguinity may compromise the health of offspring⁸⁸.

What impact would we expect these various cultural factors to have on welfare in South India relative to the North? There are at least three predictions on the basis of the information presented above. A stricter caste system, with more prejudice against a disproportionately large Dalit population would imply that we could expect that Dalits in the South would have lower biological living standards than those in the North. In addition, since more of the Southern population faces this prejudice, we would expect this to drag down the mean height of the Southern population. Furthermore, the high rate of consanguineous marriages in South India may compromise the health of the population, also biasing down the population's mean height. By contrast, greater gender equality would tend to have a positive influence on mean height. Since gender equality and consanguinity would seem to have opposite effects on the health of a population, it is difficult to predict what the net impact of specific South Indian cultural practices would have on mean height and to what extent differences in culture explain the lower mean stature in South India when compared with the North⁸⁹. Still, with these important cultural practices in mind we now turn to the impact of certain colonial policies. The subsequent sections of the study will deal

⁸⁸ Bittles, A.H., Devi, A.R.R., et al., 'Consanguineous Marriage and Postnatal Mortality in Karnataka, South India', *Man*, Vol. 22 (No. 4, 1987), pp736-45

⁸⁹ Sen, A. and Osmani, S., 'The Hidden Penalties of Gender Inequality: Fetal Origins of Ill-Health', *Economics and Human Biology*, Vol. 1 (No. 1, 2003), pp105-21

in turn with the three main research questions of this study; the influence of direct and indirect rule and railways on the biological standard of living⁹⁰.

Direct and Indirect Rule

The discussion now turns to the South Indian region as a whole, specifically the effects on biological standards of direct and indirect rule. Partly because Princely States are less well documented than British ruled regions, they have historically had much less scholarly attention⁹¹. This imbalance has begun to be addressed⁹².

In the final century of British rule in India, there was a comparatively stable system of parallel administrations; the regions ruled directly by the British from Calcutta, Delhi and London and those States whose internal affairs were under the control of Indian Princes. Over the eighteenth and nineteenth centuries, many Princely States had been annexed by the colonists and put under direct British administration. Compared to the number of Princely States earlier in colonialism, only a few that survived up to 1858 when the policy of annexation was finally abandoned. In the main, the Princely States that still existed in 1858 remained indirectly ruled until the end of the colonial period in 1947⁹³. These States had signed treaties with the British authorities revoking

⁹⁰In my MPhil thesis I also investigated the relationship between another type of colonial institution, land tenure, and anthropometric outcomes. The results showed no great difference between types of land tenure and stature Strachey, A. 'Caste, Public Policy and Health: Living Standards in South India 1910-1945', Unpublished MPhil thesis, University of Oxford, 2011.

⁹¹ Bhagavan, M., *Sovereign Spheres: Princes, Education and Empire in Colonial India* (Delhi: Oxford University Press, 2003), p1

⁹² Some significant contributions to this literature are: Bhagavan, M., *Sovereign Spheres*, Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), and Kawashima, K., *Missionaries and a Hindu State: Travancore 1858-1936*, (New Delhi: Oxford University Press, 1998)

⁹³ Ramusack, B., *Indian Princes and their States* (Cambridge: Cambridge University Press, 2004), p105

their autonomy over foreign policy, external tariffs and committed to paying tributes to the British authorities. However, States did control most aspects of internal policy, including taxation and the provision of social services such as education, and healthcare.

After annexation had come to an end, Princes were relatively secure in their lands. However, this did not mean that Princely States were governed entirely without British influence. Princes with whom the colonists were displeased perhaps because of insufficient tribute payments or for not running a 'progressive' enough administration could face sanctions, including increased interference by the British appointed political officer posted to oversee the affairs of the State⁹⁴. Other forms of sanction included reducing the number of guns in the Prince's salute, a symbol of status, and refusing permission for the Prince to travel outside his State⁹⁵. In extreme cases, such as the Maharaja of Nabha (r.1911-23) who was accused of abduction among other crimes, a Commission was formed that compelled him to abdicate⁹⁶. As late as 1926 British officials confidently asserted their right to determine the boundaries of Princely States. When the Nizam of Hyderabad requested the reincorporation of his territories of Berar into Hyderabad, which had been temporarily administered by the British but never returned, the response was:

Where Imperial interests are concerned or the general welfare of the people of a State is seriously and grievously affected by the action of its Government, it is with

⁹⁴ Ramusack, B., *The Indian Princes and Their States*, 1st ed. Cambridge: Cambridge University Press, 2003, p102.

⁹⁵ Ramusack, B., *The Indian Princes and Their States*, 1st ed. Cambridge: Cambridge University Press, 2003, p119

⁹⁶ Ramusack, B., *The Indian Princes and Their States*, 1st ed. Cambridge: Cambridge University Press, 2003, p119

the Paramount Power that the ultimate responsibility of taking remedial action must lie⁹⁷

The 'Paramount Power' here refers to the British administration and the episode shows the confidence with which the British felt entitled to dictate terms to the Princes. In addition, Desai argues that the threat the Princes perceived of being annexed by the British lived on beyond the formal end of the annexation policy in 1858. She argues that Travancore State in particular was motivated in its public policy by a wish to remain independent, such as they were, by appeasing the 'Paramount Power'. In her view, this propelled the rulers of the State to pursue a "conscious strategy of state building through modernization and commercialization and were driven by a clear anxiety on the part of the monarch to avoid annexation by the British" as a mode of self-defense⁹⁸.

After the British state took the responsibilities of the East India Company in 1857 the States had many aspects on foreign affairs and tariffs dictated to them by the colonists. Beyond this, the British had numerous ways of influencing internal policy-making in the States through forms of 'soft', rather than 'hard', power. From the late nineteenth century up to independence, Jeffrey has argued that States competed between themselves to be seen as progressive by the British⁹⁹. In the South of the country, he argues this exercise of 'soft power' had a

⁹⁷ Lord Reading, cited in Ramusack, B., *The Indian Princes and Their States*, 1st ed. Cambridge: Cambridge University Press, 2003, p128

⁹⁸ Desai, M., 'Indirect British Rule, State Formation, and Welfarism in Kerala, India, 1860-1957', *Social Science History*, Vol. 29 (No. 3, 2005), p460. She argues that this was certainly in the mind of the rulers of the Southern State of Travancore. On the period of the end of the policy of annexation see Ramusack, B., *The Indian Princes and Their States*, 1st ed. Cambridge: Cambridge University Press, 2003, p56-7

⁹⁹ Jeffrey, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992), p191

particularly strong impact in generating more progressive policy regimes in the Princely States.

Several of the most provocative recent studies have suggested that the structure of incentives contributed to more progressive rule in indirectly ruled regions than was the case in British India¹⁰⁰. Unlike colonial administrators, Princes could not be re-posted to a far off province if they proved unsuccessful meaning that they could not run away from the consequences of their actions, whether good or bad. This may, Jeffrey argues, have focused the minds of Princes towards improving their public policies since they were more sensitive to the way in which they were perceived by their own people¹⁰¹.

It is possible that progressiveness of the States was also driven by the greater salience of their citizens' wellbeing felt by the southern royals. Another factor that would have encouraged this evolution in their attitude to public policy is provided, indirectly, by the British. Throughout the nineteenth century, and especially after 1858, the British threatened to annex the remaining Princely States unless they were run in what the colonists felt was a progressive manner that would encourage stability¹⁰². In this way, Princely States had a further incentive to appear to be encouraging literacy, public health and other social reforms, which would attract the approval of the British. Although the formal policy of annexation had ended by the twentieth century, it could be that the

¹⁰⁰ See Desai, M., 'Indirect British Rule, State Formation, and Welfarism in Kerala, India, 1860-1957', *Social Science History*, Vol. 29 (No. 3, 2005), pp457-88

¹⁰¹ Jeffrey, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992), p191

¹⁰² Desai, M., 'Indirect British Rule, State Formation, and Welfarism in Kerala, India, 1860-1957', *Social Science History*, Vol. 29 (No. 3, 2005), p465-6

habit of progressive policymaking had been formed which perpetuated it after the initial spur had faded.

In one of the only quantitative analyses of living standards in Princely India, Iyer uses careful quantitative analysis to measure the difference in modern social and economic outcomes between areas that were under direct colonial rule and those previously ruled by Princely States. Interestingly, British India is significantly more fertile, implying that the colonizers selectively chose to annex the richer, more productive areas. Controlling for the influence of agricultural productivity, she finds that areas that had been ruled by Princely States have higher investment today in a wide range of public goods from schools to roads, than former British India and that this effect is attributable to the historical difference in institutions.¹⁰³ The impression created by this small, but growing, literature on Indian Princely States is of progressive Southern States investing in public goods well in advance of British India. It seems that the impact of these investments is still apparent today in the significantly better social and economic outcomes in regions that were previously indirectly ruled.

The development of progressive institutions from the mid nineteenth century in some Southern Princely States, despite the constraints placed on them by the British, might lead to the expectation that biological living standards before independence were better in the Princely States than in British India. This is tested in the section below.

¹⁰³ Iyer, L., 'The Long-Term Impact of Colonial Rule: Evidence from India', *Review of Economics and Statistics*, Vol. 152 (No. 4, 2010), p699

Anthropometrics in Southern India

The All India Anthropometric Survey was undertaken in post Independence India. However, all the individuals in the survey were born during the colonial period. The original data source gives detailed geographic information at the district level on the residence of each individual. This has been used to locate the individuals in the jurisdictions that existed at their time of birth which include the Princely States of Travancore, Cochin, Hyderabad and Mysore as well as directly ruled British India. Table 6.8 below provides descriptive statistics of the anthropometric data by these geographical regions.

Table 6.8: Descriptive Statistics of Anthropometric Data by Type of Colonial Rule

Region	Mean Height of All Birth Cohorts (cms)	Standard Deviation of Heights (cms)
Travancore	162.22	6.09
Cochin	162.43	6.16
Mysore	163.92	6.20
Hyderabad	163.31	6.10
British South India	163.69	6.27

Source: All India Anthropometric Survey: South Zone.

Table 6.8 shows that the raw average height of males in South India was generally lower in the Princely States than in British India. Only Mysore had a higher mean height on average than British India. While this information is important to include for completeness, the averages above do not take caste into account. Nor do they explore changes over time. These issues are investigated in the regression analysis in Table 6.9 below.

Table 6.9: Impact of Indirect Rule on Stature: 1910-1941

Dependent variable = Height (mm)

	Specification 1	Specification 2 with Caste- Princely State interactions	Specification 3 with individual Princely State Controls
Constant	1416.702***	1432.200***	1438.112***
Year born	0.110*	0.102	0.101
Brahmin	10.014***	9.958***	10.090***
Christian	3.162	2.841	2.775
Dalit	-14.174***	-13.491***	-13.526***
High Caste	7.467***	7.426***	7.474***
Low Caste	Reference	Reference	Reference
Muslim	8.187***	8.094***	8.088***
Tribal	-2.227	-2.219	-2.184
Unclassified	-0.983	-0.881	-0.904
Princely State dummy	-2.439**	-2.359**	-
Hyderabad	-	-	-1.249
Mysore	-	-	3.953**
Travancore	-	-	-7.360***
Cochin	-	-	1.265
British India	-	-	Reference
Brahmin*Princely	-	-5.698*	-5.781*
Unclassified*Princely	-	-4.070	-4.422
High Caste*Princely	-	3.048	3.047
Dalit*Princely	-	-10.753***	-10.884***
Tribal*Princely	-	-11.281***	-11.597***
Muslim*Princely	-	0.882	0.720
Geographical Controls	YES	YES	YES
Population Density	0.000**	-0.001**	-0.001**

Number Observations	13315	13315	13315
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In the regression results in Table 6.9, above, the constant refers to the Low Caste group in British India in all specifications. The Princely State dummy is statistically significant and negative in both Specifications 1 and 2. Mean heights in Princely India were more than 2mm shorter than in British India. This result contradicts the hypothesis that biological living standards were higher in Princely India. This supports recent research by development economist Lakshmi Iyer that concludes that the British annexed the more agriculturally productive areas of India into British India, leaving as States the more infertile regions¹⁰⁴.

Specification 2 breaks down the trend by caste and reveals that it is the Dalits and Tribal peoples whose biological living standards were most affected by indirect rule. Members of both of these low status groups in indirectly ruled India were more than one centimeter shorter than their fellow caste members in directly ruled India. Breaking down the results by individual states, as in Specification 3, reveals particularly low mean height in Travancore, while mean heights in Mysore were actually higher than those in British India. In Hyderabad and Cochin, the differences in mean height were not statistically significant from that of British India.

Comparing biological living standards in directly and indirectly ruled South India generates a varied picture. Citizens of Mysore are, on average, taller

¹⁰⁴ Iyer, L., 'The Long-Term Impact of Colonial Rule: Evidence from India', *Review of Economics and Statistics*, Vol. 152 (No. 4, 2010), pp693-713

than residents of British India. This result in itself is not surprising since, as was described above, Mysore was one of the most progressive states in India. What is surprising, however, is that biological living standards in the two most progressive states; Travancore and Cochin, are not only worse than in Mysore, but also worse than in British India.

The evidence presented in the above regressions suggests that the institutions of direct and indirect rule had an important impact on the biological standard of living. However, it is important to recognize the possibility that the results may be influenced by some unobserved characteristics. I control above for geographical variation including rainfall, latitude, longitude and altitude but not for quality of agricultural land. Using modern detailed soil quality data, Lakshmi Iyer has found that the regions annexed by the British and directly ruled thereafter tended to have higher soil quality than the regions that remained Princely States after 1858. In other words, the British annexed the most fertile regions of India¹⁰⁵. It is possible that the Princely States had lower agricultural productivity and further that the level of agricultural productivity varied between the states. If this were the case, it is possible that the lower mean height in princely states is due to lower agricultural yields generating lower agricultural incomes. In Travancore the lower height could be due to lower per capita food availability. Travancore, unlike many of the other States, was highly fertile, but also had one of the highest rates of population densities in India. In the early twentieth century the Travancore population increased rapidly, much

¹⁰⁵ Iyer, L., 'The Long-Term Impact of Colonial Rule: Evidence from India', *Review of Economics and Statistics*, Vol. 152 (No. 4, 2010), p699

faster than in other areas of India. This may have restricted individual Travancoreans living standards.

Thus, the hypothesis that the public policies of Princely states had a positive influence on the biological standard of living of their citizens has not been rejected; it could still be the case that Princely States had better social services than British India. Separating out and correctly identifying the relative impact of agricultural yields and public policy on living standards in direct and indirectly ruled India requires further study.

Table 6.10: Distribution of Agricultural Population by Occupation in Travancore, Cochin and Malabar 1901-1931

		1901	1911	1921	1931
Travancore	Landowners	70	69	69	61
	Tenants	6	6	10	6
	Agricultural Labourers	20	21	18	31
Cochin	Landowners	4	10	9	19
	Tenants	35	34	35	21
	Agricultural Labourers	60	54	50	56
Malabar	Landowners	5	4	4	6
	Tenants	34	34	35	23
	Agricultural Labourers	61	60	58	68

Source: Desai, 'Indirect British Rule, State Formation, and Welfarism in Kerala, India, 1860-1957', *Social Science History*, 3, 2005, p468.

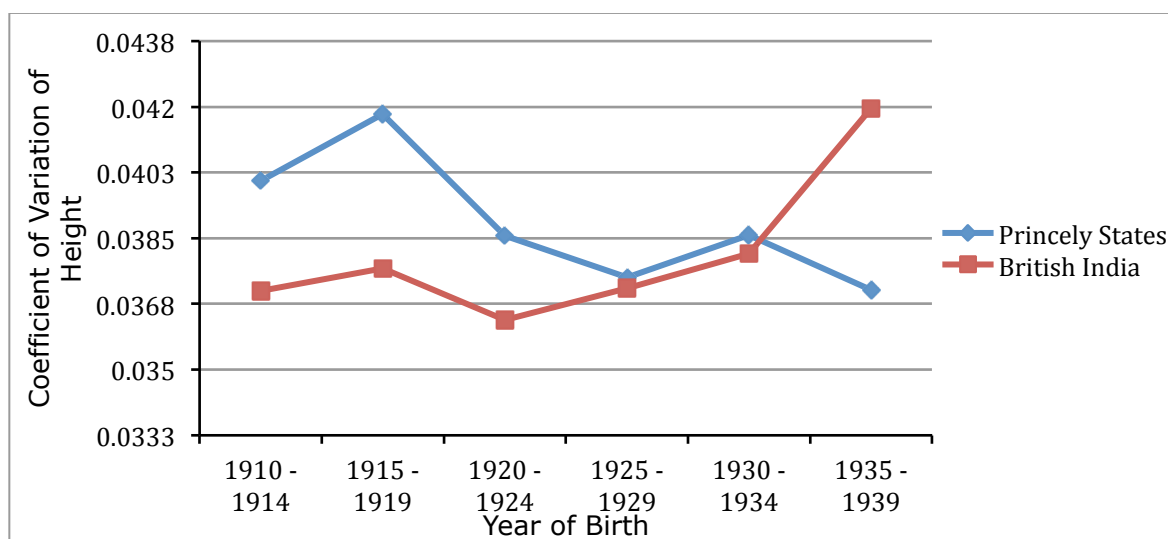
Another way in which Princely and British India may differ is in the distribution of resources. Table 6.10 above shows that in 1931 a larger

proportion of the population were landowners in Travancore and Cochin than in neighboring British Malabar. Furthermore, the proportion of landowners in Cochin is increasing over the early twentieth century, reflecting the State's land reforms, which promoted a more equal distribution of land.

Perhaps the impact of public policies that promoted equality is visible in height inequality in the Princely States, and change over time. Here I use a new method of measuring inequality with anthropometric data. Several scholars of anthropometric history have made use of the coefficient of variation (a measure of spread) in height data to estimate height variation¹⁰⁶. Using this method, important trends emerge. From having significantly higher levels of height inequality at the beginning of the period, inequality in the Princely States declines until by 1940-44 inequality in the Princely States is lower than in British India. At the same time, height inequality in British India increases from low levels in 1910-1914 over the period until it reaches the heights seen in the Princely States before the decline there. This is an important finding. It ties together state form, (relative) fiscal independence, and local welfare.

¹⁰⁶ See for instance Guntupalli, A. and Moradi, A., 'Gender Dimorphism: Discrimination in Rural India, 1930-1975', in M. Pal, P. Bharati, et al. (ed.) *Gender Bias: Health, Nutrition and Work* (New Delhi: Oxford University Press, 2009) and the work of Joerg Baten

Figure 6.9: Inequality of Heights in British India and Princely States 1910-1939



Source: All India Anthropometric Survey: South Zone.

It could be that there are unobserved effects that are driving this trend. However, the increasing inequality of height in British India, seen in Figure 6.9 above, while it declines in the States is at least consistent with the suggestion that the early introduction of progressive social policies in the States had the effect of equalizing the biological standard of living in indirectly ruled India. By contrast, the neighboring British Indian administration adopted an approach of minimal intervention, and experienced an increase in biological inequality. This is evidence that the policies introduced in the Southern Princely states did have the effect of reducing inequality in access to nutrition and health. However more empirical research is necessary to definitively prove this tentative suggestion.

Guntupalli provides evidence that height inequality was increasing in the rest of India in 1920s¹⁰⁷. As described in above, South India has been notorious

¹⁰⁷ Guntupalli, A., 'Anthropometric Evidence of Indian Welfare and Inequality in the 20th Century', [Online], 2007, 18th February 2015. Available from: <<http://tobias-lib.uni-tuebingen.de/volltexte/2007/3023/>>, p57. Further afield, there is evidence of increasing inequality in the biological standard of living in inter war period in Japan as well as India. See

for the strength and repressive power of its caste traditions, particularly in terms of prejudice against Dalit groups. This inequality in status in the South is borne out when comparing the inequality of southern heights with those of other Indian regions during the same period. Height inequality in southern India is consistently higher than in most other parts of the country during the first half of the twentieth century¹⁰⁸. This perhaps makes the apparent success of the southern Princely States in addressing inequality all the more remarkable.

Education and Height in The Princely States and British India

An important respect in which Southern Princely States were progressive, particularly in comparison with British India, was their comparatively good performance in the realm of education. Undoubtedly, as Ferguson points out, levels of education improved in India over the course of the colonial period¹⁰⁹. However not only were standards in British India far below those in contemporary Europe, but, as Table 6.11 below illustrates, they were also far below those in the southern Princely States. At independence in 1947, Travancore and Cochin States were the only parts of India with comparatively high literacy¹¹⁰.

A small amount of space will be devoted here to using the self-reported age data from the anthropometric database to construct a new index of numeracy for early twentieth century South India. This method, described in

Bassino, J., 'Inequality in Japan (1892-1941): Physical Stature, Income and Health', *Economics and Human Biology*, Vol. 4 (No. 1, 2006), p83

¹⁰⁸ Guntupalli, A. and Baten, J., 'The Development and Inequality of Heights in North, West, and East India 1915-1944', *Explorations in Economic History*, Vol. 43 (No. 4, 2006), p599.

¹⁰⁹ Ferguson, N., *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power* (New York: Basic Books, 2002), p190

¹¹⁰ Sen. A., 'Imperial Illusions', *New Republic*, Vol. 31st December (2007)

more detail below, has an advantage over census literacy data in that it is derived from individual level, rather than aggregated, data. In addition, South India has, in recent years become famous as the location of the most literate state in India¹¹¹. This section is intended to provide additional historical context for this recent development.

Table 6.11: Percentage of the Population Literate in Regions of India 1871-1941

	1871-5	1881	1891	1901	1911	1921	1931	1941
Travancore	5.7	-	11	12.4	15	24.2	23.9	47.1
Cochin	4.4	-	18	13.4	15.1	18.5	28.2	41.0
Malabar	5.3	9.9	9.1	10.1	11.1	12.7	14.4	-
Tinnevely	8.2	10.0	12.4	13.3	14.8	-	25.7	-
Madras Presidency	5	7.8	6.3	7.5	8.6	9.3	13.0	-
All India	-	-	5.8	5.3	5.9	7.1	9.5	15.1

Source: Adapted from Jeffry, R., 'How Women Made Kerala Literate', *Pacific Affairs*, 60, 1987, p456.

The literacy achievements of the southern Princely States are particularly impressive since the Madras Presidency had one of the most developed public education systems in directly ruled India¹¹². Chaudhary explains this greater public spending on education in Madras by investigating the magnitude of land

¹¹¹ Patterns of literacy in modern India follow a strikingly similar pattern to those at the beginning of the twentieth century. Although literacy has, of course, increased, parts of India with comparatively low literacy in 1900 tend also to have lower literacy today. Kerala is the most famous case with exceptionally high levels of literacy compared to the rest of the country in 1901 (see Table 10) but low literacy states like Bihar and Orissa (with only 5 percent literacy in 1931) still have very low literacy today. For more on long term trends in Indian literacy see Chaudhary, 'Determinants of Primary Schooling in British India', *Journal of Economic History*, 69, 2009, pp.269-302

¹¹² Kumar, D., 'The Fiscal System', in D. Kumar (ed.) (2vols., Cambridge: Cambridge University Press, 1983), p910

tax receipts in different Indian states. She finds that in Madras and Bombay there was a higher level of land tax, which may have facilitated the higher rates of education spending in these regions¹¹³. Madras had a relatively high level of overall per capita taxation at around 4.3 percent of GDP in 1938-9. Per capita taxation was very low in areas that have subsequently had extremely slow development such as, for example, Bihar and Orissa, in which taxation formed only about 3 percent of GDP in the same year¹¹⁴. In the 1930s, Madras was the only part of British India to have more than 40 percent of the school age population in some form of education¹¹⁵. In the southern Princely States, spending on education was clearly a high priority. In Travancore for example, around 18 percent of revenues in 1935-6 were spent on education and neighbouring Cochin State had similar figures¹¹⁶.

A recent empirical investigation into the impact of the colonial state on literacy in British India finds that that a 10 percent increase in 1911 per capita spending on primary education would have led to an increase of 2.6 percentage points in literacy in 1921¹¹⁷. This evidence implies that with more government spending on education in British India, literacy levels closer to those of the southern Princely States may have been achievable.

¹¹³ Chaudhary, L., 'Land Revenues, Schools and Literacy: A Historical Examination of Public and Private Funding of Education', *Indian Economic Social History Review*, Vol. 47 (No. 2, 2010), p181.

¹¹⁴ Clark, G. and Wolcott, S., 'One Polity, Many Countries: Economic Growth in India, 1873-2000', in D. Rodrik (ed.) *Frontiers of Economic Growth* (Princeton: Princeton University Press, 2003), p5

¹¹⁵ Chaudhary, L., 'Land Revenues, Schools and Literacy: A Historical Examination of Public and Private Funding of Education', *Indian Economic Social History Review*, Vol. 47 (No. 2, 2010), p183

¹¹⁶ Jeffry, *Politics, Women and Well-Being*, (MacMillan, 1992), p158. Comparable figures on the proportion of GDP collected as tax in the Princely States is unavailable

¹¹⁷ Chaudhary, L., 'Determinants of Primary Schooling in British India', *Journal of Economic History*, Vol. 69 (No. 1, 2009), p279

In addition to superior performance in population-wide measures of literacy, the southern Princely States were also better at delivering opportunities for women to become educated (see Table 6.12 below). For instance, in Cochin in 1931, almost 19 percent of women were literate compared with only 7.5 percent in neighboring British Malabar and 6.9 percent in India as a whole.

Table 6.12: Percentage of Female Literates in Regions of South India 1901-1941

	1901	1911	1921	1931	1941
Travancore	3.1	5	15	13.9	36
Cochin	4.5	6.1	9.4	18.6	30.6
Malabar District	3	3.5	4.9	7.5	-
Tinnevelly	1.6	3.3	4.4	5.7	-
Tanjore	0.9	1.5	2.4	3.5	-
All India	0.7	1.1	1.9	2.4	6.9

Source: Jeffry, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London: Macmillan, 1992), p60.

One possible contributor to the high literacy standards in States like Travancore is the activism of the State administrations in promoting education. For example, in 1896, Travancore abolished primary school fees for girls and in 1906 did the same for 'backward castes'¹¹⁸. Another important factor in the two most south westerly states, Travancore and Cochin, is that the substantial native

¹¹⁸ Jeffry, R., 'How Women made Kerala Literate', *Pacific Affairs*, Vol. 60 (No. 3, 1987), p454

Christian population attracted significant attention from missionary groups which set up church schools in the region from the nineteenth century¹¹⁹.

Measures of literacy recorded in the census are one source of information on the level of human capital in these parts of India in the late colonial period. An alternative method of measuring human capital in historical societies is to use 'age heaping'. This procedure exploits the regular finding that individuals with low levels of numeracy tend to report their ages inaccurately. They tend to round their age to the nearest number ending in 0 or 5 (or, in a small number of cultures, some other preferred end digits). Measuring the extent of 'age heaping' is most commonly done using the Whipple Index. This indicator ranges, from a value of 500 for maximum age heaping and low levels of numeracy to 100 representing no age heaping and high levels of numeracy¹²⁰. Figure 6.10, below, shows Whipple indices over time by caste using the self-reported ages in the data from the All India Anthropometric Survey¹²¹.

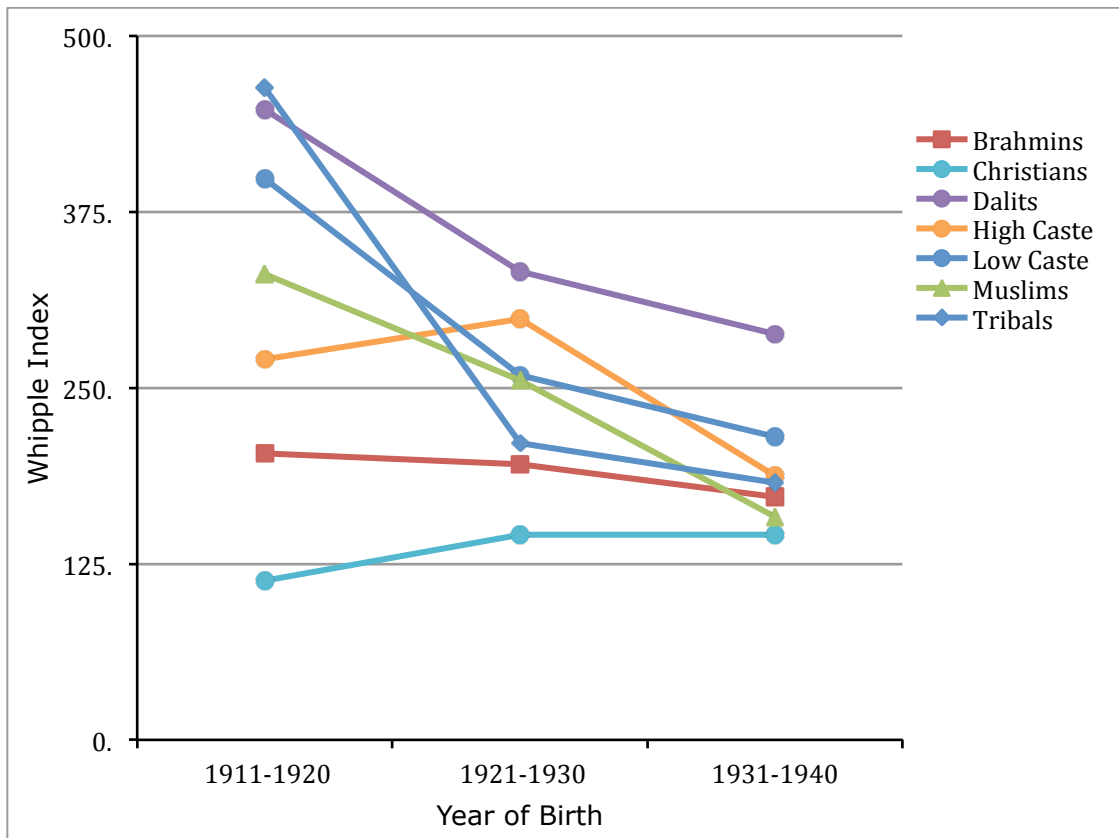
¹¹⁹ Kawashima, K., *Missionaries and a Hindu State: Travancore 1858-1936*, (New Delhi: Oxford University Press, 1998)

¹²⁰ A'Hearn, B., Baten, J., et al., 'Quantifying Quantitative Literacy: Age Heaping and the History of Human Capital', *Working Paper*, [Online], 2006) Available from:

<<http://www.econ.upf.edu/docs/papers/downloads/996.pdf>> (Accessed 17th February 2015)

¹²¹ For contextualization, the use of the Whipple index and other measures of age heaping as an indicator of numeracy is controversial. It is sometimes pointed out that groups could have a greater incentive to keep accurate measures of age when states found institutions that vary with age such as conscription or pensions. Further, in the case of India it has been pointed out that caste Hindus might be more aware of dates of birth because of the religious significance of particular years of birth being auspicious or not auspicious which influenced the choice of marriage partners. There is a detailed description of the influence of cultural practices on reporting of age in a UN sponsored Survey of Mysore: United Nations, *The Mysore Population Study*, Population Studies, 34, (New York, 1961)

Figure 6.10: Age Heaping in South India - The Whipple Index by Caste Group 1911-1940



Source: *All India Anthropometric Survey: South Zone.*

Figure 6.10 shows declining Whipple indices for almost all social groups in South India over the early twentieth century. In this framework, a declining Whipple index indicates improving numeracy. At the beginning of the period, practically every individual in the Tribal and Dalit caste groups reported an age ending either with a 5 or a 0, demonstrating particularly low levels of human capital for these groups. This demonstrates that although the heights of the Dalit and Tribal groups were low and stagnant in this period as shown above in Figure 6.8, their numeracy appears to be significantly improving. By contrast, the Christian group almost totally accurate in their age reporting as their Whipple index is very close to the minimum value, 100, throughout. For

international comparison, in the same period the Whipple index value of the UK, France and Ireland was almost 100 while for Turkey it was around 250¹²². This implies that South Indian Christians, Muslims and Brahmins' human capital was not very different from contemporary levels in Western Europe. By the end of the period the regions' Dalits and Low Castes' were more comparable, in terms of numeracy, to Turks.

Disaggregating the Whipple index by region instead of caste confirms the geographical variations in human capital visible in the Census data. The population of Travancore has a relatively low Whipple value of 174 while in neighboring British ruled Malabar, which had similar cultural practices and the same first language, the Whipple value is 210, indicating a higher incidence of age heaping¹²³. Similarly, in Hyderabad which was not a particularly interventionist or progressive state, the Whipple index was high, at 259.5, indicating comparatively low levels of numeracy.

¹²² Crayen, D. and Baten, J., 'Global Trends in Numeracy 1820-1949 and its Implications for Long-Term Growth', *Explorations in Economic History*, Vol. 47 (No. 1, 2010), pp82-99

¹²³ Travancore also had a high density of Protestant missionaries in this period, being attracted by the large ancient Christian population in the State. Consistent data on the numbers of missionaries in each area are not available but it is likely that there were more in Travancore than in Malabar during this period. Their activities promoting education may also have contributed to the lower Whipple index in Travancore State. See Jeffrey, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992), p97

Table 6.13: Age Heaping and Height by Caste 1910-1941

Dependent Variable: Height (mm)

	Specification 1	Specification 2 – with Region Fixed Effects
Constant	1478.9***	1521.671***
Year born	0,076	0.057
Brahmin	9.286***	9.229***
Christian	3.096	3.626
Dalit	-13.989***	-13.779***
High Caste	7.416***	7.435***
Low Caste	Reference	Reference
Muslim	8.169***	8.103***
Tribal	-2.157	-2.110
Unclassified Caste	-0.906	-0.849
No Age Heaping	3.640***	4.061***
Region Fixed Effects	NO	YES
Geographical Controls	YES	YES
Number of Observations	13315	13315

The regression in Table 6.13, above, is similar in format to those presented in previous sections, the constant term refers to the Low Caste group in British India. The only addition is the inclusion of the new variable 'No age heaping'. This variable was constructed by allocating a dummy variable of value 1 to all those individuals whose self-reported ages ended neither in 0 nor 5. For all other individuals, the variable is set to zero. The intention was to capture all those people who were sufficiently numerate to report a non-heaped age. Since such a measure excludes those individuals who correctly report an age, which ends in 0 or 5, it is fairly rough metric. In the results reported in Table 6.13

above, the variable does have a statistically significant effect. Controlling for caste, those individuals who do not report heaped ages, are almost 4 mm taller than those who do¹²⁴. Specification 2 demonstrates that this result is robust to the inclusion of region fixed effects. These findings clearly indicate that more numerate individuals have greater mean height.

It is difficult to use this evidence as the basis of any causal claims about the relationship between height and numeracy. In a recent paper, Steckel argues that he has found a direct impact of education on mean height, independent of income¹²⁵. However, since there is no available individual level income data for our purposes, it is impossible to say whether higher income is generating both greater height, through better nutrition or health, and also better numeracy or whether better numeracy influences height directly in some way. Nonetheless it is clear that, even controlling for caste and region, less age heaping is associated with greater height.

¹²⁴After having constructed this variable, I later found that Guntupalli and Baten, in 'Development and Inequality of Heights', use a similar measure in their quantitative analysis with similar results.

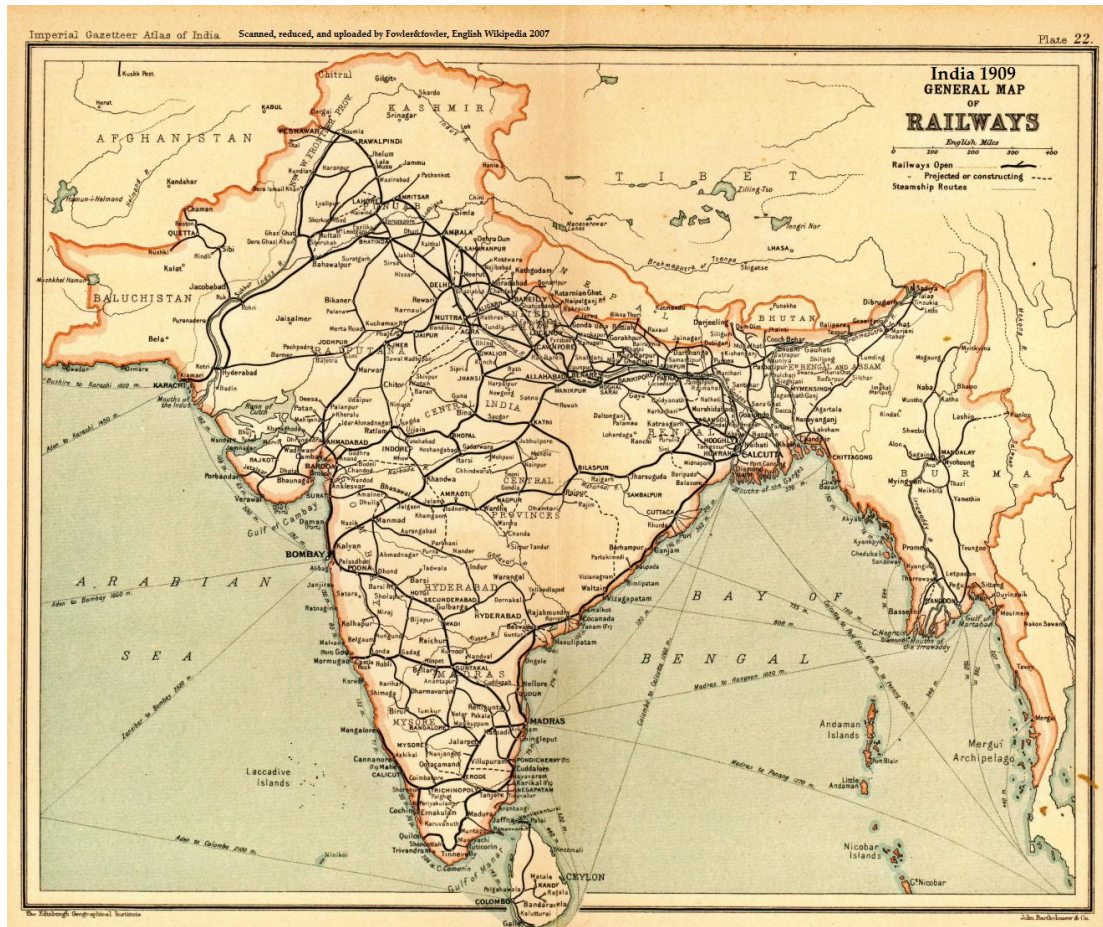
¹²⁵ Steckel, R., 'Heights and Human Welfare: Recent Developments and New Directions', *Explorations in Economic History*, Vol. 46 (No. 1, 2009), p8

Chapter 7. Railways

The second aspect of British public policy assessed in this Part of the dissertation, is railways. The expansion of the railway network was simultaneously championed by the British as a driver of progress and derided by Indian nationalists as a tool of exploitation. Railways have been accused of exacerbating income inequality by providing for high status groups and further impoverishing the already poor¹. A large literature on the relationship between railways and living standards in India has built up over more than a century. This section will introduce the history of Indian railways as well as the relevant literature before describing this study's estimates of the impact of railways on mean height.

¹ The most notable advocate of this view in the case of India was Gandhi himself. See Gandhi, *Hind Swaraj*, Cambridge University Press, 2009

Figure 7.1: Indian Railways in 1909



Source: Imperial Gazetteer of India Atlas, 1909, Secretary of State for India, Oxford: Clarendon Press, 1909.

Railway building began in India in the 1850s and continued up to and beyond, independence in 1947. Figure 7.1, above, provides an overview of the Indian rail network up to 1909. Between 1890 and 1947 the total length of railway tracks in India more than doubled, increasing from 25,495 km to 65,217 kms (see Table 7.1 below). The sources of finance for this construction varied over time. Having been a largely privately owned network, the Indian railway system was gradually nationalized over the last decades of the nineteenth and first decades of the twentieth centuries. By 1910, 90 percent of the country's

railways were state owned². In a recent paper, Burgess and Chaudhry estimate the impact of this nationalization on the efficiency of the railways. By estimating the Total Factor Productivity (TFP) of railways both before and after nationalization, they find that there was no decline in this measure of efficiency after the railways became state owned. Since such declines have been observed after nationalizations in several European nations, they conclude that the British Indian government was relatively good at delivering efficient railway services.

Table 7.1: Size of the Indian Rail Network 1860-1947

Date	Railway Track in India (km)
1860	1,349
1870	7,678
1890	25,495
1920-1	56,980
1946-7	65,217

Source: Hurd, 'Railways', in Kumar, D., and Desai, M., (eds.), *The Cambridge Economic History of India*, (Cambridge, 1983), p739.

Between the late 1890s and the late 1930s, railways alone made up between one fifth and one half of total public investment in overheads (see Table 7.1 below). As a result, the effect of railways on Indian living standards has attracted considerable attention as a window into the impact of British public policy on her colony.

² Burgess and Chaudhary, 'State Ownership, Productivity and Colonialism', (Online publication, 2010), <http://www2.lse.ac.uk/economicHistory/seminars/ModernAndComparative/Papers/chaudhary.pdf>, p1

Table 7.2: Gross Public Investment in Overheads in British India (Millions Rs.)

Year	Railways	Irrigation	Roads and buildings	Total Overhead Expenditure	Railways as percentage of total
1898-9	75	20	56	165	45.5
1901-2	88	24	67	196	44.9
1919-20	256	35	198	514	49.8
1927-8	434	103	245	827	52.4
1931-2	150	95	195	488	30.7
1937-8	86	50	186	358	24.0

Source: Kumar, D., 'The Fiscal System', in Kumar, D., and Desai, M., (eds.), *The Cambridge Economic History of India*, (Cambridge, 1983), p936. This table is confined to British India because there is no comparable overhead investment data available for Princely States.

Railways were constructed across both British ruled regions and the Princely States. Although some Princely rulers were enthusiastic about the expansion of railways into their territories others were not. For example, the rulers of the largest and most powerful Princely State, Hyderabad, were skeptical of the supposed benefits of railways. They feared that allowing them to be freely constructed in their State would increase the influence of the British³. Eventually, the Nizam was cajoled into accepting the construction of a rail link, at his own cost, between the Great Indian Peninsular Railway and Hyderabad on a route specified by the British⁴. Thus, even the largest and most powerful Princely State was unable to resist British insistence that railways should be constructed across the sub-continent in both directly and indirectly ruled areas. Railway policy in India including the detail of the routes was heavily influenced,

³ Ramusack, B., *Indian Princes and their States* (Cambridge: Cambridge University Press, 2004), p192

⁴ *Ibid*, p194

even dictated, by the British authorities. In this way, railways were clearly an arm of the imperial project. One scholar of Indian economic history concludes that had India not been part of the British Empire, she “could not believably have acquired [railways, ports, irrigation and the telegraph] in such extent and quality [as she did]’⁵.

Table 7.3: Number of Railway Stations in British India and the Princely States

		Madras	Mysore	Hyderabad	Travancore	Cochin	All Princely States
Number of Railway Stations	1911	124	35	16	6	2	59
	1921	132	47	19	11	2	79
	1931	132	50	21	11	2	84
	1945	215	90	66	14	4	174
Number of stations per square mile in 1945		1.52	3.64	0.67	2.08	2.94	1.33

Source: History of Indian Railways, 1911, 1921, 1931 and 1945.

Since the British drove forwards the pattern of railway building across India, even in the Princely States, what considerations determined where lines would be constructed? Three aspects of political economy governed the location of railway building in India. The first was military strategy. This mainly revolved around facilitating the efficient movement of troops and military access to boarder regions in the North. Security had much less influence over railway policy in South India since this region shared borders only with other parts of

⁵ Roy, T., *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000).p257

India. Second was economics since the railway companies were operated to make profits for both their public and private owners⁶.

Finally, after the terrible famines of the 1870s, railways were seen as the key to moving grain around the country thereby reducing the risk of food shortages⁷. After the 1870s, some lines were constructed specifically as 'famine lines' to allow quick transportation of grain into areas at risk of crop failure⁸. The concern with famine prevention was not purely motivated by benevolence. Famines contributed to civil unrest, which posed a risk to the government as well as being very expensive in terms of relief provisions⁹. The most important factors in determining the placement of railways in Southern India then, were profitability and food security¹⁰. Whether these aims were achieved, however, is unclear. For example, with respect to food security, Arnold claims that railways precipitated the development of a "vast and speculative grain trade" in the country, which led to grain riots across the South in the 1910s when grain was exported from areas facing food shortages.

⁶ Although this was an important motivation throughout the railway-building period, some lines were more successful than others in generating profits. Before the near complete nationalization of the railways in the early twentieth century, many lines were consistently loss making. Before 1900, all railway in South India earned less than the 5% interest guaranteed to investors and therefore required subsidy. See Hurd 'Railways', p743

⁷ Government of India, *Report of The Famine Commission*, (London, 1880), HMSO.

⁸ For example, the Southern Maratha Railway which connected the Bombay Presidency with Western parts of the Madras Presidency was constructed with famine prevention in mind. See McAlpin, 'Dearth, Famine, and Risk', *Journal of Economic History*, 39, 1979, p150

⁹ There was a concern to reduce the costs of intervention during famine even though the amount of intervention by the British Indian government was limited. This was partly driven by the ideology of free markets. For a discussion of this see Stokes, E., *The English Utilitarians and India*, (Oxford, 1989)

¹⁰ Andrabi, T. and Kuehlwein, M. 'Railways and Price Convergence in British India', *Journal of Economic History*, Vol. 70 (2010, No.2), pp351-377

Railways and trade

One of the reasons why the colonial state focused so much on improving transportation infrastructure was the view that more trade would deliver important benefits for India. The source of this conviction comes from the theories of Adam Smith. In classical economic theory, trade is one of the mechanisms through which resources are allocated more efficiently. Smith was widely read by colonial officials in this period and statements like that below has an important impact on shaping colonial views on trade:

Every town and country ... in proportion as they have opened their ports to all nations, instead of being ruined by this free trade, as the principles of the commercial system would lead us to expect, have been enriched by it.¹¹

The motivation to trade generally comes from an incentive to export goods that are produced relatively cheaply domestically and to import goods, which are produced more cheaply elsewhere. Thus, where regions have different efficiencies in producing goods, both regions can benefit from exchange. This is known as comparative advantage and is generates the incentives for interregional trade. The incentive to trade, however, will only result in actual exchanges if the transport costs between the two regions are sufficiently low that enough of the benefits from trade remain intact after accounting for transportation costs. If transport costs are too high, trade may not occur between regions whose comparative advantage lies in producing very different sets of goods and could otherwise trade very profitably.

For India the wide diversity of ecological and agricultural zones implies great scope for interregional trade. Coastal, deltaic and other regions with high

¹¹ Smith, *Wealth of Nations*, (ed. Cannan, p399), (Chicago, 1976).

rainfall, have high agricultural yields. In South India the Malabar and parts of the Coromandel coasts, as well as the deltas of the Cauvery, Godavari and Kistina rivers, are ideally suited to the production of rice. Inland, where rainfall is scantier it was not possible to grow rice or wheat. Instead, cultivators grew coarse millets. In addition to these different agricultural economies, there were, of course, areas producing manufactured goods. Given sufficiently low transportation costs, there would clearly be opportunities for trade between these various different economic regions of southern India.

Historically, trade within inland India was inhibited because of poor transportation. The rivers were largely unnavigable, ruling out the comparatively cheap option of fresh water transport, leaving slow, unreliable and costly bullock carts as the only choice for transporting goods across much of the interior of the country¹². This was the setting in which the British determined that railways would provide more reliable, cheaper and faster transport. According to one estimation, Indian freight rates by rail were eighty percent lower than by bullock cart¹³.

The smooth functioning of the Indian grain market was of particular concern to British Indian authorities. In the pre-railway economy, the cost of transportation prohibited bulk movements of grain. Consequently, local grain prices were largely determined by variations in the local grain supply as

¹² Only the Indus and Ganga rivers provided large, navigable waterways and both of these were in North India. See Hurd, 'Railways', in Kumar, D., ed., *The Cambridge Economic History of India*, (Cambridge, 1983), p738

¹³ Studer, 'India and the Great Divergence', *Journal of Economic History*, 68, 2008, p423. See also Hurd, 'Railways', p740

described in this early nineteenth century report on Coimbatore in the Madras Presidency by Sir Frederick Nicolson:

There were practically no roads but merely tracks...and what traffic existed was carried on by pack bullocks, and by ponies and by basket boats on the Cauvery [river]. The result was not only that all imported commodities were dear, but export trade [between districts] was insignificant and only in valuable articles such as ghee, spices and so forth. Grain could not be moved, so that prices depended on local scarcity or abundance¹⁴

In facilitating the movement of grain from deficit to surplus regions, the British clearly felt that railways had been effective in reducing the frequency of famine.

A more modern analytical framework, under which there is similar confidence in the power of trade and markets to successfully allocate goods, including grain, uses the concept of 'market integration'. Just as in the classical economic theory of Adam Smith, improvements in transport infrastructure are seen as having an overwhelmingly positive influence on wellbeing¹⁵. Market integration refers to the process by which resources in factor markets and finished goods become available to be traded within a single market, usually as a result of improvements in transportation. With more market integration the variation in prices of a given good in an area will decline, so variation in the prices of goods is the metric used by many economic historians to measure market integration. Markets can be brought closer together in this way whether they are within the same administrative region or in totally different countries. With the expansion of transport infrastructure such as steamships, railways and improved roads, the late nineteenth and early twentieth centuries saw a

¹⁴ Cited in McAlpin, 'Railroads, Prices, and Peasant Rationality', *Journal of Economic History*, 34, 1974, p673

¹⁵ An early formulation of classical trade theory is Adam Smith's *Wealth of Nations*

dramatic increase in market integration, within and between nations, and India was no exception.

Recent work by Studer provides strong evidence that the British authorities were correct in their view that railways would contribute to convergence of grain prices between regions. The period of fast railway expansion in India, 1860-1914, saw a rapid decline in the dispersion of grain prices. Studer concludes that by the 1910s Indian agricultural markets had been transformed from a series of isolated islands of economic activity to a truly national market¹⁶. Rather than simply pointing to the coincidence of grain market integration and railway expansion, as Studer does, another recent study by Andrabi and Kuehlwein, takes the analysis a stage further. They estimate the specific impact of railways on market integration in the Indian wheat market. Like Studer, their paper concludes that a national Indian grain market had developed by the beginning of the twentieth century. However, their econometric analysis finds that, although railways contributed somewhat to this trend, they only explain 10-20 percent of the improvement in the market integration in wheat between 1860 and 1920¹⁷. They control for the effects of railways both on districts in which they were located and neighbouring districts.

¹⁶ Studer, R., 'India and the Great Divergence: Assessing the Efficiency of Grain Markets in Eighteenth- and Nineteenth-Century India', *Journal of Economic History*, Vol. 68 (No. 2, 2008), p403. This despite the fact that well into the twentieth century, the British imposed duties on all goods imported into Princely States through British India, see Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p56.

¹⁷ Andrabi, T. and Kuehlwein, M. 'Railways and Price Convergence in British India', *Journal of Economic History*, Vol. 70 (2010, No.2), pp351-377

Prices were converging in this period, but at almost the same rate in districts without railways as those with railways¹⁸.

Andrabi and Kuehlwein's analysis presents a significantly smaller estimate of the impact of railways on grain market integration than has been found for other countries during periods of railway expansion. For example, Metzger finds that 83 percent of the Russian decline in grain price dispersion in the late nineteenth century was due to railways¹⁹. If Andrabi and Kuehlwein's estimations are correct, this provides a significant revision downwards of the importance of railways for grain market integration in India. The most recent contribution to the literature on Indian grain market integration is by Burgess and Donaldson. Indian agriculture is heavily reliant on the timing and generosity of the monsoons but the quality of monsoon rains varies from region to region. Thus, before improvements in transportation, poor rains in a given region would have a strong influence on the local supply and the price of grain. They test the hypothesis that railways made local Indian grain prices less responsive to local rainfall shocks, through facilitating interregional trade in food grains. They conclude that railways did indeed smooth the impact of local supply shocks, which in turn, reduced vulnerability to famine²⁰. McAlpin makes a similar case that railways reduced the risk of famine, using data from the Bombay Presidency over the late nineteenth and early twentieth centuries²¹.

¹⁸ Andrabi, T. and Kuehlwein, M. 'Railways and Price Convergence in British India', *Journal of Economic History*, Vol. 70 (2010, No.2), p 373

¹⁹ Metzger, J., 'Railroad Development and Market Integration: The Case of Tsarist Russia', *Journal of Economic History*, Vol. 34 (No. 3, 1974), p548

²⁰ Burgess, R. and Donaldson, D., 'Can Openness Mitigate the Effects of Weather Shocks? Evidence from India's Famine Era', *American Economic Review*, Vol. 100 (No. 2, 2010), pp449-53

²¹ McAlpin, M., 'Dearth, Famine, and Risk: The Changing Impact of Crop Failures in Western India, 1870-1920', *Journal of Economic History*, Vol. 39 (No. 1, 1979), p157

Not all authors are as optimistic as this on the capacity of markets to reduce the risk of famine. For example, Amartya Sen, in his famous analysis of the 1943 Bengal famine questions the extent of the food security benefits that trade offers. Although, within the entitlement framework, developed in *Poverty and Famines*, one channel through which people may secure access to resources is through trade, this trade can have both a positive and negative influence on the stock of available food in an area, depending on the relative size of imports and exports. Sen argues that the important factor behind the Bengal famine, in which 1.5 million people died, was not insufficient transportation infrastructure in Bengal; in fact it had one of the most well developed railway networks in the country²². Rather, the cause was a shift in the capacity of a substantial section of the population to secure access to food, largely driven by changes in relative prices during the period of wartime inflation²³. In famine policy, as in other aspects of public action, the British regime was ideologically resistant to large-scale intervention, and the government's insufficient relief in the wake of the Bengal famine attracted widespread criticism²⁴.

While the British were confident of the benefits of railways, Gandhi was scathing of their influence in his country:

It must be manifest to you that but for railways, the English could not have such a hold on India as they have now...Railways have increased the frequency of famines.²⁵

²² Sen, A., *Poverty and Famines: An Essay on Entitlement and Deprivation* (Oxford: Clarendon Press, 1981), p52

²³ Ibid, p80-2. Partly in response to *Poverty and Famines*, Ravallion published a book that emphasized inadequate information rather than entitlements as a key element in South Asian famines. See Ravallion, M., *Markets and Famines* (Oxford: Oxford University Press, 1987).

²⁴ Sen, A., *Poverty and Famines: An Essay on Entitlement and Deprivation* (Oxford: Clarendon Press, 1981), p78

²⁵ Gandhi cited in Parel, *Hind Swaraj and Other Writings*, (Cambridge, 1997), p47

Similar skepticism is expressed in what Roy calls the literature of the 'left-nationalist paradigm' in the literature on colonial history led by Dutt and Bhatia, who are doubtful of Imperial claims about the benefits of railways²⁶. They argue that improved transportation links encouraged a shift in cropping patterns, away from food grains and towards non-food crops like cotton, which reduced the aggregate food supply and, so the argument goes, made famines more likely. There is some evidence supporting these claims of the 'left-nationalist paradigm'. For example, the advent of railways in the Guntur district of the Madras Presidency occasioned a substantial shift of cropping patterns away from food grains in favour of tobacco. However, this evidence is only for one district and further investigation of the impact of railways on the proportion of food crops cultivated is outside the scope of this study. Another argument against railways made by members of this school is that the impact of railways on living standards is mediated by class and caste; enriching landowners and merchants and impoverishing small cultivators²⁷.

Thus far, few authors have addressed the potential distributional impact of railways on living standards. One of the only scholars to have addressed the issue, outside of the nationalist literature cited above, is McAlpin in a work published in the 1970s, which provides a theoretical analysis of the potential

²⁶ See Dutt, *The Economic History of India in the Victorian Age*, (London, 1952)

²⁷ See Dutt, *The Economic History of India in the Victorian Age*, p349. See also McAlpin, M., 'Railroads, Prices, and Peasant Rationality: India 1860-1900', *Journal of Economic History*, Vol. 34 (No. 3, 1974), p662. Additional arguments against British railway policy made by Indian nationalists include the view that fixed rate of interest of 5 percent paid by Indian railway companies to, largely British, investors. This insured investors against the risk that railways would be unprofitable at the expense of Indian taxpayers. Another objection was that the backward linkages from the investments in railways had little impact on other sectors in the Indian economy because so much of the hardware, like the steam engines themselves, were constructed in Britain. See Hurd, J.M., 'Irrigation and Railways: Railways', in Kumar, D., (ed.) *The Cambridge Economic History of India* (Cambridge: Cambridge University Press, 1983), p741-9

redistributive effect of railways. She argues that since most landless cultivators would live at some distance from the railway and were unlikely themselves to own the means necessary to get goods to and from the station, this made them vulnerable to exploitation by the merchant classes. Therefore, merchants would have great power over the prices of goods and could have skimmed off much of the benefit resulting from the expansion of the railway network. Thus McAlpin concludes that: "The benefits that cultivators derived from expanding markets depended on their access to those markets." Landowners, on the other hand, particularly those with large land holdings, are more likely to be able to avoid the intermediary agents²⁸. Other authors including Washbrook and Baker, also point to increasing stratification in South Indian society during this period, emphasizing the powerful position of the merchant in rural Madras²⁹.

Finally, there is a body of literature devoted to quantitative estimates of the impact of railways on economic growth. Perhaps railways could have contributed to the well being of India via economic growth? Morris attempted to rehabilitate the reputation of railways after the criticism they received from the 'left-nationalist paradigm'³⁰. In his work he focused more on the impact of railways on growth, rather than on market integration³¹. He advocates the view that throughout the period of British colonization, policies were introduced that

²⁸ McAlpin, M., 'The Effects of Expansion of Markets on Rural Income Distribution in Nineteenth Century India', *Explorations in Economic History*, Vol. 12 (1975), p301

²⁹ See Washbrook, D., 'Country Politics: Madras 1880 to 1930', *Modern Asian Studies*, Vol. 7 (No. 3, 1973), p481. Baker, C.J., *The Politics of South India 1920-1937* (Cambridge: Cambridge University Press, 1976). Although this view has not gone unchallenged, for a dissenting interpretation see Robert, B., 'Economic Change and Agrarian Organisation in 'Dry' South India 1890-1940: A Reinterpretation', *Modern Asian Studies*, Vol. 17 (No. 1, 1983), pp59-78

³⁰ Morris explicitly refers to Dutt as representing an analysis of Indian economic history he intends to revise Morris, M., 'Towards a Reinterpretation of Nineteenth-Century Indian Economic History', *Journal of Economic History*, Vol. 23 (1963), p608

³¹ Morris, 'Reinterpretation of Nineteenth-Century Indian Economic History', p611

encouraged the expansion of markets, specialization and economic growth. He is even optimistic about developments during the inter-war period, when growth was sluggish, arguing that crucial structural changes occurred which underpinned the faster growth of the post independence period³².

The methodology used to assess macroeconomic contributions of railways leaped forward with the development of Fogel's social savings methodology in his work on American railways in the nineteenth century, and has since been extended to many other countries. This methodology compares the costs of transport in the presence of railways with the next best alternative³³. In other words the social saving due to railways is "the loss in national income caused by the substitution of an inferior for a superior transportation technology"³⁴. Fogel's work generated the controversial result that railways had a much smaller impact on economic growth in the USA than had previously been thought³⁵. By contrast, Summerhill in his paper on late nineteenth to early twentieth century Brazil, an economy much more similar to India's than the USA in terms of per capita income, finds that the reduction in freight rates due to the railways provided a significant boost to Brazilian growth, generating an average social rate of return of around 20 percent³⁶. He argues that an important driver of this large, positive result is geography; that Brazil

³² *Ibid*, p617-8

³³ Fogel, R., 'Notes on the Social Saving Controversy', *Journal of Economic History*, Vol.39 (No.1, 1979) p2-3

³⁴ *Idem*.

³⁵ Fogel, R., 'Notes on the Social Saving Controversy', *Journal of Economic History*, Vol.39 (No.1, 1979), pp1-54

³⁶ Summerhill, W., 'Big Social Savings in a Small Laggard Economy: Railroad-Led Growth in Brazil', *Journal of Economic History*, Vol. 65 (No. 1, 2005), 72-102, p86. In Mexico, Coatsworth finds that railways delivered an 'indispensible' additional 4-6 percent of GDP in the late nineteenth and early twentieth centuries. See Coatsworth, J., 'Indispensible Railroads in a Backward Economy: The Case of Mexico', *Journal of Economic History*, Vol. 39 (No. 4, 1979), p952

was particularly suited to overland transport having a particularly poor river network for navigation. Donaldson has conducted a similar procedure for India³⁷. Using a social savings procedure, he finds that railways are responsible for a 14.8 percent increase in real agricultural income³⁸. In another specification, estimating the increase in economic welfare due to railways, he finds an even greater contribution of 16 percent. None of these studies, in their estimations of social savings discuss the distribution of the growth benefits from railways in transportation between different sections of society.

The anthropometrics of railways

The studies described above address the impact of railways on various economic variables such as income and market integration. However the relationship between income and the biological standard of living is not always very close. Further, most of the studies, with the exception of McAlpin's, do not address the issue of whether railways had a differential impact on different social groups within Indian society. A small literature has developed investigating the particular problem of the impact of market integration on the biological standard of living. In his study of mean heights in antebellum Pennsylvania, which was experiencing significant market integration at the time, Cuff finds that:

³⁷ Donaldson, D., 'Railroads of the Raj: Estimating the Impact of Transportation Infrastructure', *NBER Working Paper Series*, [Online], Vol. 16487 (2010) Available from: <<http://www.nber.org/papers/w16487>> (Accessed 17th February 2015)

³⁸ *Ibid*, p29

Men from counties which were the least involved in market activity and least developed economically were significantly taller than men in more market integrated locales. ...In antebellum Pennsylvania, being self-sufficient obviously conferred nutritional advantages.³⁹

Thus in antebellum Pennsylvania, market integration is associated with a decline in biological living standards. There is a distributional aspect in his analysis also; it is the workers, both skilled and unskilled whose heights decline enough to pull down the mean height of the whole population. While, at the same time, the stature of farmers and high status professions did not decline by the same amount. A similar pattern develops for nineteenth century Bavaria. Baten finds that urban centers located near productive agricultural areas, including cities like Munich, had sufficient purchasing power to pull foodstuffs away from the surrounding countryside. Thus the agricultural regions that were integrated into larger markets, tended to have compromised nutrition and declining heights while those at a greater distance or without modern transportation were protected from this effect⁴⁰. This study's results do not provide any evidence of the effect that Baten describes occurring in India. In Bavaria, population density was associated with lower mean height. In the regression results presented in this study, population density is consistently included as a control but is rarely statistically significant and the magnitude of the coefficient is never much greater than zero.

³⁹ Cuff, T., *The Hidden Cost of Economic Development: the Biological Standard of Living in Antebellum Pennsylvania*, (Aldershot: Ashgate, 2005), p207

⁴⁰ Baten, J., 'Protein Supply and Nutritional Status in Nineteenth Century Bavaria, Prussia and France', *Economics and Human Biology*, Vol. 7 (No. 2, 2009), p179. See also Komlos, J., 'Shrinking in a Growing Economy? the Mystery of Physical Stature during the Industrial Revolution', *Journal of Economic History*, Vol. 58 (No. 3, 1998), p787 and Humphries, J. and Leunig, T., 'Cities, Market Integration, and Going to Sea: Stunting and the Standard of Living in Early Nineteenth-Century England and Wales', *Explorations in Economic History*, Vol. 62 (No. 2, 2009), pp458-78

These studies indicate that railways may not have only been an arm of colonialism but they might also have had an impact on the biological standard of living in the country through their impact on market integration. In Table 7.4 below, the results of a regression estimating the impact of railways on the mean height of early twentieth century South India are presented. In specification 1, the same caste controls used throughout this study are again included together with the year of birth, population density and the usual geographical controls. The variable 'Railway Stations in Decade of Birth' is also added. This measure was calculated from the decadal publication *History of Indian Railways*. It corresponds to the number of stations in the first ten years of life in an individual's home district. In the first specification the coefficient of this variable is small and statistically insignificant. In specification 2, caste-railway interactions are added. These interaction variables pick up the special effect of the number of railway stations in a district on the mean height of each caste group. Interestingly, although the original railway variable did not have a significant effect on mean height, several of the caste-railway interaction variables are statistically significant. Railways have a statistically significant positive effect on the mean height of the High Caste group. At the same time, they have a fairly large, statistically significant and negative effect on the mean height of both the Dalit and Tribal groups. The results indicate that one more railway station in the district of origin in the decade of birth implies a loss of mean height 1mm for Dalits and almost 3mm for Tribals. For the Brahmins, Unclassified Castes and Muslims, the effect is small and statistically insignificant.

Table 7.4: Impact of Railways on Stature 1910-1941:

Dependent variable: height (mm)

	Specification 1 – No Caste interactions	Specification 2 – With Caste Interactions
Constant	1460.674***	1340.441***
Year born	0.116*	0.145**
Brahmin	10.059***	9.972***
Christian	3.170	3.068
Dalit	-14.168***	-13.607***
High Caste	7.524***	7.725***
Low Caste	Reference	Reference
Muslim	8.234***	8.125***
Tribal	-2.268	-2.224
Unclassified	-1.016	-0.719
Population Density	0.000***	0.000**
Railway stations in decade of birth	-0.093	-0.049
Brahmin*Railway	-	0.236
Unclassified*Railway	-	0.073
High Caste*Railway	-	0.542*
Dalit*Railway	-	-1.021***
Tribal*Railway	-	-2.826***
Muslim*Railway	-	-0.323
Geographical controls	YES	YES
Number of Observations	13315	13315

In the above regressions, the constant refers to the Low Caste group in British India. In the previous chapter, it was shown that there are some spatial correlates of the biological standard of living on different castes, driven by

differences in rainfall. Higher annual rainfall was associated with lower mean height of the tribal and Dalit groups. These same groups also seem to be negatively affected by railways, even after controlling for rainfall and other geographical variables. There is the possibility that the influence of the railways on mean height could vary spatially. Perhaps, in places where quasi serfdom persisted for longer for Dalits, railways exert a more negative effect on this group than elsewhere.

One possible channel through which this could occur is through the increased opportunities for trade that railways open up. Bringing markets closer together could allow more trade with regions further away. In areas where Dalit labour is freer, increased demand for labour would lead to an increase in wages for Dalits. However, in areas where Dalits are closer to being serfs or slaves, their masters may have had an incentive to extract more labour without having to increase wage payments. To test this hypothesis, a new set of interaction variables were introduced into the regression⁴¹. These variables estimate the impact of railways on each caste group in each region of South India.

The full results are not reported here in the interests of space (see appendix 2 for full regression results). The most interesting results of the railway-caste-region interactions were for the Tribal, Dalit and High Caste groups. For both the tribal and high caste groups there was a statistically significant effect of railways on mean height in almost every region. For the

⁴¹ The full results of this regression are reported in Appendix 4

Tribals railways were negatively associated with mean height in almost all the regions except for the North West and South of Madras and Mysore⁴².

While railways are associated with a decline in the biological standard of living of tribal people, the opposite result was found for members of high castes. There was a statistically significant, positive effect on the railway-high caste-region variables for all regions of South India except for North East and South Madras, and Cochin and Travancore. A similar pattern of a positive association between height and railways is observed for the Brahmins.

The railways significantly and negatively affected the heights of Dalits. However, there were many fewer regions in which the heights of Dalits responded to railways than was the case for the Tribals or High Castes. Railways were only associated with a decline in the mean height of Dalits in the coastal regions of South West and South Madras and Cochin.

One of the reasons why railways may have had such a widespread negative impact on the mean height of tribal people is their impact on the natural environment. The demand for timber to make railway sleepers grew as the building of railway tracks accelerated from the end of the nineteenth century. In general, sleepers were largely supplied by local sources of timber. As a result, when a railway was constructed through a forested area, the nearby trees were often cut down, depleting the forests. While the railway may have influenced the biological standard of living through market integration as

⁴² There is no tribal height data for Cochin and Travancore so these regions were excluded from the analysis

discussed above, it is also possible that the negative impact of railways on the ecosystems on which many tribal people depended, contributed to this result⁴³.

Did railways have a positive or negative effect on Indian biological living standards? The answer, based on these results, is that, where railways had an effect on height, it was always positive for high castes and negative for Dalits and Tribals⁴⁴. A particularly suggestive trend in the data is that Dalits' heights are negatively affected by railways only in the coastal far South where prejudice against Dalits is particularly strong. It is in these regions that Dalits had the least control over their own labour. Since their labour was relatively unfree, it is reasonable to assume landlords would be able to extract more work from these Dalit people without corresponding increases in pay or food allowances. Railways would increase the incentives for landlords to extract more labour from or provide fewer resources, for the Dalits working on their land. The geographical pattern in the results suggests that it was only in the far South that landlords had the ability to do this. The effect on the biological welfare of the Dalits, who would also have been labouring in the fields from childhood, is clear from their stunted adult stature. Thus these results show that the effect of railways on the biological standard of living varied significantly both by caste and by geographical region.

⁴³ Guha, R. and Gadgil, M., 'State Forestry and Social Conflict in British India', *Past and Present*, Vol. 123 (No. 1, 1989), pp141-77

⁴⁴ This is consistent with some work by Brennen, Schlomowitz and McDonald, 'Long Term Change in Indian Health', *Journal of South Asian Studies*, 26, 2003, pp. 51-70, where they conclude that inequality in the biological standard of living was increasing in India between 1860 and the 1960s. However, Guntupalli and Baten find no evidence of increasing inequality in North India in the early twentieth century

The impact of railways in Southern India is marked. However, the government spent less on overhead capital investment in the southern India than in many other regions⁴⁵. Studies of other regions would be required to establish whether the effects of the railways on the biological living standards were stronger in other parts of India.

Politics, Agriculture and Height Inequality

Ferguson concludes that the political agitations in India that eventually resulted in independence sprung, “not from the impoverishment of the many but by the rejection of the privileged few”⁴⁶. Whatever the views of the Indian ‘privileged few’, the results from the last section demonstrates that railways are empirically associated with a decline in the heights of the ‘impoverished many’, the Dalits and the Tribal people, and improvement in the heights of the ‘privileged few’. Although, on its own, this does not disprove Ferguson’s view, it does seem that the effect of one of the most significant colonial investments was to widen further the gap in biological living standards between the high and low castes. Might this impact of colonialism have had political consequences?

Radical political movements were growing in influence in South India from the end of the nineteenth century. Political organization was perhaps easier in the much more literate south than elsewhere in the country⁴⁷. The region was not one of the main sites of Congress Party activism, although the

⁴⁵ Kumar, D., 'The Fiscal System', in D. Kumar (ed.) (2vols., Cambridge: Cambridge University Press, 1983), p915

⁴⁶ Ferguson, N., *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power* (New York: Basic Books, 2002), p218

⁴⁷ Ramusack, B., *Indian Princes and their States* (Cambridge: Cambridge University Press, 2004), p231

party was represented in the South. Rather, the focus of radical political activities in the early twentieth century surrounded movements for improved conditions of lower castes and classes. Events, that are seemingly unrelated to caste, prompted caste-based protests. South India experienced a crop failure in 1918, which left most other regions of the country largely unaffected. The cash-rich North drew food grains out of the South, resulting in what seems to have been an entitlements crisis in the South. This led to a dramatic increase in protests by the lower castes, particularly by Dalits, against landowners⁴⁸. In addition, there were also protests held in Southern railway yards, in order to prevent grain leaving the region⁴⁹.

In the 1930s caste-based protests erupted again. This time agricultural prices had collapsed across India but particularly the prices of cotton and rice, which were crucial Southern crops. Households dependent on selling agricultural goods saw their nominal income decline. This became a serious problem when combined with rents that were fixed in nominal terms. The result was that non-landowning agriculturalists' real incomes collapsed and riots against landowners broke out across many parts of South India⁵⁰.

In addition to sudden protests sparked by changes in relative prices, there were also longer-term political agitations based around caste over this period. From the 1920s lower caste group associations began to develop. They lobbied for better social and economic conditions for their members. These groups were

⁴⁸ Arnold, D., 'Looting, Grain Riots, and Government Policy in South India', *Past and Present*, Vol. 84 (No. 1, 1979), p118

⁴⁹ *Ibid*, p119

⁵⁰ Baker, C.J., *The Politics of South India 1920-1937* (Cambridge: Cambridge University Press, 1976), p206

also associated with the strikes that occurred frequently in the 1920s and 1930s in the Madras Presidency and the southern Princely States such as Travancore⁵¹. Among these groups were the Tamil Self-Respect Movement and other non-Brahmin movements organized with the intention of increasing the representation of non-Brahmin castes in higher education and high status jobs⁵². Communist groups took root in Travancore from the 1940s and began forming the networks that helped them win elections in the region soon after independence.

Movements centered on the grievances of particular castes did not develop in the same way in other Indian regions. This may be due to the different regional caste dynamics in the southern region compared with the rest of the country as well as the comparatively high literacy of low caste groups in the south compared to the north. While Guntupalli and Baten's data show a steady increase in the biological standard of living of all castes at roughly the same rate in the North, there is a significant relative decline in the Dalit and Tribals' position in the South. It is important to stress that lower mean height represents severe physical distress during the growth process, near starvation, poor health or heavy child workloads. It would have been impossible for the contemporary disadvantaged groups not to have noticed the differences in these aspects of life even if they did not associate them with the differences in average height between castes. This perhaps helps put the caste-based activism in the region in context.

⁵¹ *Ibid*, p169ff.

⁵² *Ibid*, p22

In addition, the Dalits in British India were living in a region where inequality in the biological standard of living was increasing while, nearby in the progressive Princely States, the opposite trend prevailed. Again, this is unlikely to have gone totally unnoticed by the contemporary populations. Indeed there is some evidence that inequality was higher in some of the most politically volatile regions. There was a particular focus of unrest in the Godavari and Kistna deltas, some of the most important rice producing regions in the South⁵³. These were also heartlands of Congress support in the 1920s with candidates for Congress consistently fielded for local elections⁵⁴. In the 1930s they became enthusiastically involved in the Civil Disobedience movement. Contraband salt was manufactured throughout the delta regions in line with Gandhi's anti-salt tax campaign⁵⁵. Later on they were also "the first stronghold of the Communists in the South of India"⁵⁶.

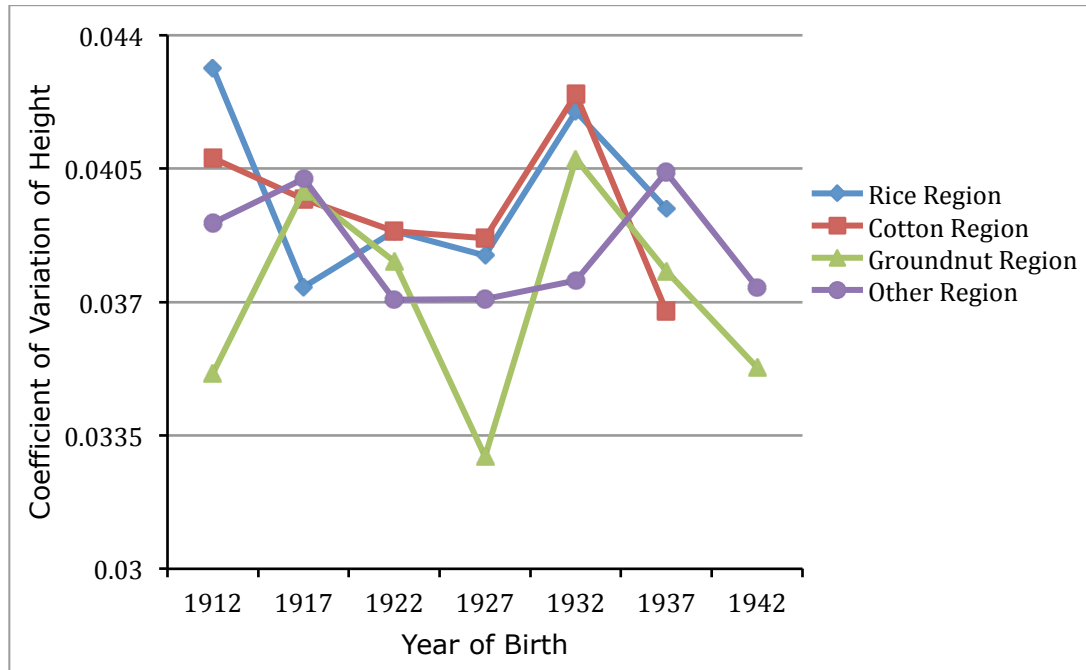
⁵³ *Ibid*, p134

⁵⁴ *Ibid*, p160

⁵⁵ *Ibid*, p216

⁵⁶ *Ibid*, p135

Figure 7.2: Height Inequality by Agricultural Region 1910-1942



Sources: *All India Anthropometric Survey: South Zone*. Agricultural regions are defined by the proportion of cultivated area devoted to each crop in 1931. Rice regions have more than 50 percent of cultivated area under rice, cotton regions have more than 15 percent under cotton and groundnut regions have more than 15 percent under groundnuts. The other category includes areas that do not fall in any of the above categories. Agricultural data from Government of India, Census 1931, Vol.14. There are no data presented for rice or cotton regions in 1942 because of insufficient observations in the sample.

Figure 7.2 above shows that inequality in height is high in rice-producing regions, such as the Kistna and Godavari delta. This evidence is clearly more indicative than concrete. However it does suggest that leading regions of political unrest are likely to have had higher biological inequality, since they were also rice-producing regions. It seems that there was a nexus between the agrarian structure, inequality and radical political activity in early twentieth century south India.

Conclusion to Part 2

Heights were lower in South India than in the North in the early twentieth century. The South Indian data analysed here show that the stagnation in mean heights found by other scholars in other regions of India, also pertained in South India. This corresponds with economic conditions in the regions. Real wages were lower in South India than in the North. This indicates that South Indians in this period had both lower economic and biological living standards than those in the North.

The operation of the caste system was, in generally, stricter and more restrictive in the South than in the North. When the anthropometric data is broken down by caste this distinctive South Indian pattern is revealed. While in the North there is a continuous spectrum of mean heights that diminish gradually with ritual status, in the South there is a large gap between high status and low status groups with few communities falling in the middle.

One drawback of the anthropometric data used here is that the original survey only collected male heights. A key difference between North and South India, in general, is the status of women. In southern regions of the country such as Travancore and Mysore States, women had higher status, greater opportunities to engage in work and to exercise agency than in many parts of Northern India. This is likely to have had an impact on biological living standards of each of these populations. It is well understood that poor female nutrition has an adverse impact on the biological living standards of their offspring, both male and female. Policies that improved the education and

welfare of women could be expected to improve the health of the next generation of children. The geographical patterns of female empowerment and its impact on nutrition is a fertile area for future research in Indian history.

Biological living standards varied by administrative system. The regression analysis showed that mean male heights were lower in indirectly ruled India. This was not the expected result given the findings from Part One, which indicated greater public investment in social welfare in the large South Indian States. However, it does accord with other researchers' findings that the agricultural productivity of the States was lower than in British India. This probably accounts for the States' lower biological living standards. What analysis of the changes in height over time reveal is that inequality in the States was declining in the early twentieth century while in British India it increased. So, although the States began the century with lower biological living standards than British India, over time welfare outcomes became more equal in the States.

The other aspect of policy assessed here, namely railways, also had a significant impact on welfare equality. This aspect of colonial rule transcended both directly and indirectly ruled India and has been championed at the time and in the literature as a major contribution by the British to the sub-continent. The data here reveal that in those regions which had access to railways, caste based inequality of biological outcomes increased.

The overall picture of this analysis is that direct British rule, as well as railways – a prime arm of colonial investment – were both associated with increased biological inequality in India.

Thesis Conclusion

From the late nineteenth century distinctive styles of fiscal policy emerged in the large Princely States. While Travancore and Mysore began investing in social expenditure, Hyderabad committed itself to a balanced budget regime more stringent than that in place in British India. In the twentieth century tensions emerged over the operation of fiscal relations between British India and the States. One instance of this was the case of indirect taxes, especially customs. It is recognized in the literature that the States objected to the limits placed on their ability to levy customs. For the first time, this study assessed the fiscal impact of this system on various aspects of colonial public finance. The customs arrangements between British India and the States had an impact on the taxation composition of the States. Since British Indian customs authorities collected part of the customs taxes paid by State's citizens, the States' revenues had a smaller proportion of customs revenues than British India. This became an important issue after World War One when India erected significant customs barriers for the first time and so began generating larger customs revenues. The other implication is that part of the taxation levied on States' citizens was paid to the British Indian treasury. This represented a leakage of tax revenues away from the States. This is the first quantitative assessment of the size and impact of this.

It has been recognized in general terms that the British Indian financial system was vulnerable to inflation in areas such as land revenue. However, the impact of inflation on the tribute payments from the States to British India has

not been appreciated before. This study has shown that the real value of the tributes declined over time. Contemporary British officials from the nineteenth century onwards complained that the States did not contribute enough for their defence via the tribute (and this was used as grounds for maintaining the customs system). Yet the officials did not make the link between inflation and the declining real value of the tributes. The tribute payments never made up a large proportion of British Indian revenues. From 1871 onwards total tribute payments never comprised more than 1.3% of the total British Indian revenues. However, for many States the tribute was a heavy burden on their fiscal system in the nineteenth century.

The impact of the declining value of the tribute payments was asymmetric, having a far greater impact on the public finances of the States than on British India. The declining real value of the tribute links closely to the issue of defence expenditure. British India played an important military role in the extension and maintenance of Britain's global position up to 1947. From the late nineteenth century troops raised in India were used extensively outside of India in conflicts such as the Afghan wars and the First and Second World Wars as well as numerous smaller colonial conflicts from Africa to China. Much of the cost of these operations was borne by British Indian taxpayers. Indian nationalists such as the pamphleteer Ahmed decried the use of Indian public resources for this purpose. However, the weight of defence expenditure did not fall equally within India. The eroding value of the States' contributions to defence insulated the States from much of the cost of twentieth century imperial conflicts. This meant

that the States public expenditure was not weighted heavily towards defence, as it was in British India.

At various points in the late colonial period the British proposed reforms of the tribute system in order to extract greater financial contributions towards defence services from the States. Yet, there was little political will to undertake the complex task of renegotiating all the individual treaties with each of the States. In the end, no changes were made. This is one instance of what Kumar had termed the “the rigidity of public policy” in colonial India¹.

Along with tribute payments the proportion of expenditure on the royal families declined in the large States in the early twentieth century. The royal families continued to receive sizeable annual sums from the public purse at the end of the period. However, as a proportion of total public revenues the amount was small. In terms of administrative expenditure, the patterns appear to be similar in British India and the large States. In both regions administration was expensive and consumed a large portion of the budget.

It is recognized in the literature that Mysore and Travancore spent a large proportion of their revenues on social expenditure. What has not been recognized until now is that even in States without progressive reputations such as Hyderabad, social expenditure formed a higher proportion of the budget than in British India. This is all the more remarkable in the case of Hyderabad because of this State’s prioritisation of budget surpluses. The significant increases in social expenditure in the large States took place in the early

¹Kumar, D., ‘The Fiscal System’ in Kumar and Desai (eds.), *The Cambridge Economic History of India*, Cambridge University Press, 1982, p905

twentieth century, at the same time as expenditure on the tribute and the royal family was declining as a proportion of total expenditure.

During the Second World War, British India reformed its regressive tax system, which had been largely composed of indirect and land taxes. More direct taxes were introduced or increased including income tax and the super tax. Travancore and Mysore followed suit, developing the sophistication of their tax administration, which was later utilized as a pool of income tax expertise by the newly independent Indian government.

Throughout the period security and defence dominated British Indian public expenditure. This was not true in the States although these areas of expenditure did increase during isolated incidents such as Hyderabad's failed independence attempt between 1945-47 when both security and defence expenditure in the State increased significantly.

By the end of the Second World War the sclerotic Indian institutions had been overtaken by world events. For some time non-western peoples in other parts of the world had also been engaged in nationalist struggles, notably in the Middle East. In addition, the new world power, America, was unsympathetic to colonial rule. By the end of British rule in India, these international trends fed into a growing perception that the colonial regime was illegitimate despite the incremental moves towards greater Indian representation in government. The situation with the Princes was more complex. On the one hand they were, at least, Indian and had long histories that connected them with the territories they ruled, unlike the British. However, the States' administrations were, with almost no exceptions, significantly less democratic even than British India.

There are multiple anecdotal reports of the popularity of princely rulers throughout the colonial period and throughout India. Though there were some exceptions, it seems that the citizens of the States had much less objection to princely government than did directly ruled Indians with the British authorities. This may have underpinned the States' capacity to do without such large military and internal security expenditure.

In international studies of public finance, democratisation has often preceded the expansion of social expenditure². In colonial India it appears to have been the other way around. British India had much more developed political institutions than even the most progressive States but accorded social expenditure a lower fiscal priority. However, it may have been that the States were more responsive to the political voices of their citizens because of their more tenuous constitutional position combined with their desire to keep up with (or overtake) their British neighbors.

Some historians have portrayed the States as regressive and backwards. Copland blames the British policy of non-interference from 1909 for what he considers their backward condition³. This study, instead, supports the newer thesis of scholars like Bhagavan who view the States as pursuing their own ideals of modernity, which included heavy public investment in social expenditure. Despite severe limitations on their freedom to impose taxes, especially in the important early twentieth century areas of customs and excise, the States were able to use their remaining autonomy to pursue distinctive types

² Lindert, P., *Growing Public: Social Spending and Economic Growth since the Eighteenth Century* (2vols., Cambridge: Cambridge University Press, 2004), Volume 2, p33

³ Copland, I., *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977), p313

of fiscal policy. The most important enabling factor in this was the much lighter burden of defence expenditure in the States than in British India.

There is plentiful information on post independence heights in south India. The Southern region is the only part of India in which a consistent increase in mean height is observed between 1947 and the 1970s⁴. Furthermore the most recent data from the Demographic and Health Surveys show that South India transitioned, from having low mean height in comparison with the rest of the nation between 1910 to 1942, to having one of the tallest today⁵. Further investigation is required into the reasons for this explosion in the biological standard of living in post independence South India. Height is by no means the only area in which South India has excelled in the past fifty years or so. Kerala State has the highest literacy of any Indian state, has maintained a balanced gender ratio and infant mortality is now so low that the State has become the poster child for improvements in human development possible in developing countries. Links have been made between the caste-based lobbying in the early twentieth century and the development of a competitive political culture in which lower status groups use their political power to demand access to public services⁶. It is also possible that the early activism of the southern Princely States in these fields created a culture in which health, education and gender equality were more highly valued than elsewhere in the country. The apparently strong links between events during the colonial period and the postcolonial

⁴ Guntupalli, *Anthropometric Evidence of Indian Welfare and Inequality*, p100.

⁵ For more on the Demographic and Health Surveys see their website at:
<http://www.measuredhs.com/>

⁶ Amrith, 'Health in India', (Published Online, 2009),
<http://www.bwpi.manchester.ac.uk/resources/Working-Papers/bwpi-wp-7909.pdf>, p20.

success of South India, Kerala in particular, in terms of the biological standard of living invite further investigation.

This study has estimated the impact of caste, direct and indirect rule and railways on South Indian living standards in late colonial period. Caste is clearly an important determinant of biological standards of living across India in the North as well as the South. However, in comparing the height data from both regions, it is striking that the differences in height in the South are mainly between the lowest status groups and the rest of society while in the North there is more of a continuous spectrum of heights from low to high castes. Furthermore, geography appears to be an important influence on the extent of caste-based deprivation of Dalit and Tribal people. In areas with more rainfall, the biological standard of living of these groups is lower than that of the high castes.

Comparisons of directly and indirectly ruled regions of Southern India do not support the hypothesis that biological living standards were higher in Princely States than in British India. However, the thesis that the Princely States had better public policies has not been refuted since lower living standards could be due to the States' poorer agricultural endowments. If social policies improved the welfare of mothers then the payoff to stature would take at least one generation before having effect.

The final strategy in assessing the impact of aspects of British rule was to look at the influence of railways on mean stature, using a detailed database of the growth of the South Indian railway network collected for this study. Seen by some as one of Britain's most important contributions to India, the results show

that, where they had an effect, railways served to exaggerate caste differences in biological living standards. The already short tribal people, many of whose customary property rights were not recognized, became even shorter in districts with more railway stations, as did the Dalits in regions where caste-based prejudice against them was the strongest and where they did not have full control over their own labour. By contrast, high caste groups, who already had a significant height advantage, were taller in areas with more railways or not statistically affected by them.

What can be learned about colonialism in India from studying height data? In Britain, Empire disproportionately benefitted the top end of the social spectrum⁷. This study provides evidence that one of the most widespread and conspicuous arms of colonialism in India, the railways had the effect of reinforcing inequality. The biological standard of living of those with higher ritual status and greater wealth, the Brahmins and high castes, improved with this aspect of colonialism while those on the margins of society, the Tribals and Dalits experienced declining biological living standards.

Both parts of the thesis indicate that public policies in the States differed from British India and that this may well have had an impact on Indian biological living standards. The anthropometric data support findings from other studies that the geographical endowments in the States were worse than in British India. In other words, the areas annexed by the British were, in general, the most agriculturally fertile regions with better living standards. The public accounts clarify the time period when the States' governments became more actively

⁷ Offer, A., 'The British Empire, 1870-1914: A Waste of Money?', *Economic History Review*, Vol. 46 (No. 5, 1993), 215-38.

involved in social expenditure, the area of government activity one would expect to have the most direct impact on biological living standards. The early twentieth century was the moment where the States began pursuing a noticeably more interventionist government expenditure programme characterized by high social expenditure. This is the same period in which the anthropometric data analysed here shows that the inequality in the biological standard of living declined in the States but not in British India. The age heaping analysis also points to significantly better numeracy in States such as Travancore than in British India. From this we can conclude that not only did the large South Indian States target more public resources to social expenditure, but that they also achieved better outcomes than British India both in terms of reducing inequality in the standard of living, and in terms of education. Iyer's important recent work revealed the ongoing positive impact of Princely institutions on Indian development today. Her discussion of the reasons for this pattern however, discounts differences in fiscal policy too quickly, focusing on the incentive effects of Prince's seeking to avoid annexation by the British. While her explanation cannot be ruled out, neither can fiscal policy. The fiscal data she uses is from a single year, 1896. The analysis here shows that this was before the State's distinctive fiscal policies had emerged. Iyer's approach masks the important fiscal differences in late colonial India that have been unearthed here. It is hoped that this analysis provides impetus for further exploration of the distinctiveness of the political economy of the Indian Princely States and the link to social development from the colonial period to today.

Bibliography

Archival Records Consulted

Kerala University Library, Trivandrum, Kerala

The Statistics of Travancore, Various editions

The State Archives of Kerala, Trivandrum, Kerala

Proceedings of the Sri Chitra State Council, Various editions

Legislative Council Proceedings, Various editions

Proceedings of the Sri Mulam Assembly, Various editions.

British Library

IOR/L/PS/13/23, Levy of Customs Duties by Indian States, Political (Internal) Department

IOR/L/PS/13/201, Quarterly Surveys of the Political and Constitutional Position in British India, 1945

IOR/L/PS/10/413, Telegraph from the Viceroy to the Secretary of State for India 11th June 1927

IOR/L/PS/13/900, 'States' Finances'

IOR/L/PS/13/1764, 'Economies in the Political Office'

IOR/L/PS/13/1499, 'Rajkot Succession', Political Department, Second Half of September 1939

IOR/P/V/1121, Ahmed, *Public Revenue and Expenditure in India*, Political and Economic Information Department of the All India Congress Committee, Allahabad, 1938

IOR/R/1/1/1451 (1), File No. 9-P, Secret, 1924-1927, Government of India, Foreign and Political Department, 'Reduction by Rs 10.5 lakhs of the subsidy payable by Mysore State'

IOR/R/1/1/1820, 'Financial Difficulties of Patiala State', Foreign and Political Department

IOR/R/1/1/1881, 'Patiala Finances: Request of the Patiala Darbar for the grant of a loan to enable them to liquidate their debts Political Department'

IOR/R/1/1/1905, Administrative Training of His Highness the Maharaja of Travancore', Government of India Foreign and Political Department, 1930

- IOR/R/1/1/2017, 'Proposed Donation by His Exalted Highness the Nizam of Hyderabad to Combat the Civil Disobedience Movement', Foreign and Political Department, Government of India, 1930
- IOR/R/1/1/2422, 'Information on the Patiala budget compiled from the Finance Minister's notes'
- IOR/R/1/1/2443, Report on the Conditions of the State of Alwar, June 1933,
- IOR/R/1/1/2912, Fortnightly Reports of the Madras States 1937, Political Department, Government of India
- IOR/R/1/1/3472, Political Department, Political Branch, Finances of the Patiala State, Marked Secret
- IOR/R/1/1/3641, Fortnightly Reports Madras States 1941, Government of India
- IOR/R/2/36/353, Letter of 7th July 1924 from the Resident of Mysore to the Secretary of the Political Department of the Government of India
- IOR/R/2/36/353, Letter of 22nd August 1919 from The Dewan of Mysore, Sirdar Kantaraj to the Resident of Mysore, Mr Cobb,
- IOR/R/2/36/353, Confidential Letter of 20th January 1920 from Mr Cobb, Resident at Mysore to the Political Secretary of the Government of India,
- IOR/R/2/36/353, Letter of 15th July 1924 from the Maharaja of Mysore to the Viceroy of India
- IOR/R/2/56/575, Mysore Residency File
- IOR/V/4/83 Statistical Yearbook of Hyderabad
- IOR/V/10/822, Baroda Administration Report 1943-44
- IOR/V/10/1032, Report on the Administration of Cochin 1941-42
- IOR/V/10/1200 Hyderabad Administration Report 1906-7
- IOR/V/10/1202 Hyderabad Administration Report 1927-28
- IOR/V/10/1023 Hyderabad Administration Report 1928-29
- IOR/V/10/1204 Hyderabad Administration Report 1929-30
- IOR/V/10/1206 Hyderabad Administration Report 1930-31
- IOR/V/10/1216 Budget Notes for the Year 1939
- IOR/V/10/1636 Mysore Administration Report 1929-20
- IOR/V/10/1638 Mysore Administration Report 1931-2

- IOR/V/10/1642 Mysore Administration Report 1935-1936
- IOR/V/10/1648 Report on the Administration of Mysore for the Year 1943-44
- IOR/V/10/1819, Rajkot Administration Report for 1935-36
- IOR/V/10/1820, Rajkot Administration Report for 1936-37
- IOR/V/10/1822, Rajkot Administration Report for 1938-39
- IOR/V/10/2062, Travancore Administration Report, 1878 to 1886
- IOR/V/10/2072, Travancore Administration Report, 1903-04
- IOR/V/10/2074, Travancore Administration Report, 1904-5
- IOR/V/10/2076, Travancore Administration Report 1909-1920
- IOR/V/10/2088, Travancore Administration Report, 1937-38
- IOR/V/10/2091, Travancore Administration Report 1940-41
- IOR/V/14/84 Statistical Abstract of Mysore for the Years 1923-1947
- IOR/V/16/363, Budget for 1921-22
- IOR/V/16/370, Budget for 1925-26
- IOR/V/16/395, Budget proposals for 1934-35
- IOR/V/16/397, Budget for 1935-36
- IOR/V/16/412, Budget for 1940-41
- IOR/V/16/416, Budget for 1941-42
- IOR/V/16/490, Proceedings of the Standing Finance Committee 1942-1947
- MSS EUR C152/24, Letter of 2nd March, 1930 from Mahatma Gandhi to Lord Irwin,
British Library
- Official Reports*
- Report of the Retrenchment Committee, Nagpur, Government Press, 1922
- Mysore General Budget Estimates 1931-32, Government of Mysore, Financial
Department, 1931
- Government Central Press, *Report of the Indian Fiscal Commission 1921-22*, Simla
- The Lee Commission, 'Report of the Royal Commission on the Superior Civil
Services in India', 27th March 1924, HMSO, London, 1924
- Statistical Abstract of Mysore, 1915,

Report of the Indian States Enquiry Committee (Financial) 1932, HM Stationary Office, London,

Report of the Indian States Committee 1928-1929, London, HMSO, 1929

Report of the Indian States Finances Enquiry Committee 1948-49, Part 1, Government of India

Imperial Gazetteer of India Vol. IV, 1907

Report of the Government of India Secretariat Committee, Government of India Press, New Delhi, 1937

Hansard:

HC Deb 11 May 1860, vol 158, cols 1131-1136

HC Deb 6 August 1885, vol 300, cols 1289-1290

HC Deb 30 May 1906, vol 158, col 494

HL Deb 27 June 1923, vol 54, col 636

HL Deb 27 June 1923, vol 54, col 620

HC Deb 15 June 1925, vol 185, col 3.

HL Deb 30 March 1927, vol 66, col 869

HC Deb 21 February 1938 vol 332, col 4.

HC Deb 26 February 1946, vol 419, cols 1746-7

HC Deb 15 July 1948, vol 453, cols 1404-10.

Digital Primary Sources

Rainfall data sourced from the Government of India at:

<http://www.imd.gov.in/section/hydro/distrainfall/>

Malaria data sourced from the Oxford Malaria Atlas Project at:

<http://www.map.ox.ac.uk/>

Scheduled Caste data sourced from the Government of India at:

<http://socialjustice.nic.in/sclist.php>

Scheduled Tribe data sourced from the Government of India at:

http://censusindia.gov.in/Tables_Published/SCST/ST%20Lists.pdf

Primary Published Works

Aitchison, A Collection of Treaties, Engagements and Sunnunds Relating to India and Neighbouring Countries, Volume V, British Foreign Office Press, 1876

- Brumpton (Ed.), A Selection from the India Office Correspondence of Robert Cecil, Third Marquis of Salisbury, 1866-1867 and 1874-1878, Edwin Mellen Press, New York, 2002
- Chakrabarti, The Native States of India, London, Luzac, 1896
- D'Souza, Financial problems of the States in Federal India, Bangalore City, Bangalore Press 1935
- Forbes, India of the Princes, London, 1939
- Foreign and Commonwealth Office Collection, 'Case on Behalf of His Highness the Nizam in the Matter of the Berar Provinces', published online by The University of Manchester
- Karkaria (Ed.), Lord Curzon's Farewell to India: Being Speeches Delivered as Viceroy and Governor-General of India During Sept-Nov 1905 by The Right Honourable Lord Curzon of Kedleston, Thacker and Co, Bombay, 1907
- Gandhi, The Indian States' Problem, Jivanji Dahyabhai Desai Navajivan Press, Ahmedabad, 1941
- Government of Hyderabad, A Review of Hyderabad Finance, Government Press Hyderabad, 1951
- Government of Hyderabad, Finances of Hyderabad State, Narayan, 1970, State Archives of Hyderabad, Hyderabad
- Government of India, Census of India 1901, Vol, XV, (Madras)
- Government of India, Census of India, 1931, Vol. 1.
- Government of India, Census of India, 1931, Vol. 14, (Madras)
- Government of India, Report of The Famine Commission, (London, 1880), HMSO.
- Government of India, Imperial Gazetteer of India, New edition, published under the authority of His Majesty's Secretary of State for India in Council. Oxford: Clarendon Press, 1907-1909
- Government of India, Imperial Gazetteer of India: Hyderabad, New edition, published under the authority of His Majesty's Secretary of State for India in Council. Oxford: Clarendon Press, 1909
- Government of India, Foreign and Political Department, Summary of the Proceedings of the Government of India in the Foreign Department During the Viceroyalty of Lord Curzon of Kedleston, January 1899 to November 1905: Native States, Calcutta, Government Press, 1908
- Government of India, Department of Food, 'A Manual on the Organization of Food Control and Rationing', Simla, 1944.

- His Majesty's Stationary Office, Statistical Abstract Relating to British India from 1910-11 to 1919-20, (London, 1922)
- Harlow and Carter, (eds.) *Imperialism and Orientalism: A Documentary Sourcebook*, Malden, MA, Blackwell, 1999
- India Railway Department, *History of Indian Railways*, (Simla, 1911, 1921, 1931, 1945)
- Menon, *Integration of the Indian States*, First published 1955, 2014 edition, Orient Black Swan, Hyderabad
- O'Malley, *The Indian Civil Service 1601-1930*, Frank and Cass, 1965
- Parliamentary Papers, House of Commons and Command, Volume 14, House of Commons, p156
- The Maharaja Dhitaj of Patiala, *Public Pronouncements in Connection with the Indian States Committee*, Spottiswoode, London, 1928
- Rakshit, H. K., et al., *All India Anthropometric Survey: South Zone (Basic Data)*, (Calcutta, 1965)
- Reserve Bank of India, *Banking and Monetary Statistics of India*, Delhi, 1954
- Stephen, *The Nineteenth Century*, Vol. XIV, No. LXXX
- Strachey and Strachey, *The Finances and Public Works of India*, London, 1882
- Thomas, *The Growth of Federal Finance in India Being a Survey of India's Public Finances from 1833 to 1939*, Madras, Oxford University Press, 1939
- Thomas and Sastry, *Commodity Prices in South India 1918-1938*, University of Madras, Bulletin of the Department of Economics, 1940
- The Imperial Gazetteer of India, Vol.4, 1909
- Vakil (ed), Rao, *Taxation of Income in India*, Longmans, Mangalore, 1931
- Theses*
- Menon, 'Popular Princes: Kingship and Social Change in Travancore and Cochin 1870-1930', *Modern History DPhil University of Oxford*, 1998
- Ikegame, *Royalty in Colonial and Post-Colonial India: A Historical Anthropology of Mysore from 1799 to the Present*, Ph.D, University of Edinburgh, 2007

Printed Secondary Works

- A'Hearn, B., Baten, J., et al., 'Quantifying Quantitative Literacy: Age Heaping and the History of Human Capital', *Working Paper*, [Online], 2006) Available from: <<http://www.econ.upf.edu/docs/papers/downloads/996.pdf>> (Accessed 17th February 2015).
- Acemoglu, D., Johnson, S., et al., 'The Colonial Origins of Comparative Development: An Empirical Investigation', *American Economic Review*, Vol. 91 (No. 5, 2001), 1369-401.
- Agarwala, S.N., 'The Age at Marriage in India', *Population Index*, Vol. 23 (No. 2, 1957), 96-107.
- A'Hearn, B., 'Anthropometric Evidence on Living Standards in Northern Italy, 1730-1860', *Journal of Economic History*, Vol. 63 (No. 2, 2003), 351-81.
- Alexander, K., 'The Neo-Christians of Kerala', in J. Mahar (ed.) *the Untouchables in Contemporary India* (Tucson, Arizona: Arizona University Press, 1972), 153-61.
- Amrith, S., 'Health in India since Independence', *BWPI Working Paper*, [Online], Vol. 79 (2009) Available from: <<http://www.bwpi.manchester.ac.uk/resources/Working-Papers/bwpi-wp-7909.pdf>> (Accessed 17th February 2015).
- Arnold, D. and Guha, R., *Nature, Culture and Imperialism: Essays on the Environmental History of South Asia* (New Delhi: Oxford University Press, 1995).
- Arnold, D., 'Looting, Grain Riots, and Government Policy in South India', *Past and Present*, Vol. 84 (No. 1, 1979), 111-45.
- Baker, C.J., *The Politics of South India 1920-1937* (Cambridge: Cambridge University Press, 1976).
- Balachandran, G., 'Finance and Politics in Late Colonial India: 1917-1947', *Journal of South Asian Studies*, Vol. 19 (No. 1, 1996), 77-101.
- , 'Britain's Liquidity Crisis and India, 1919-1920', *Economic History Review*, Vol. 46 (No. 3, 1993), 575-95.
- Baloch, H., *Memoir of Douglas Fell* (Karachi: Sayad Hasmi Reference Library, 2010).
- Bandyopadhyay, R., 'Land System in India: A Historical Review', *Economic and Political Weekly*, Vol. 28 (No. 52, 1993), A149-55.
- Banerjee, A. and Iyer, L., 'History, Institutions and Economic Performance: The Legacy of Colonial Land Tenure Systems in India', *American Economic Review*, Vol. 95 (No. 4, 2005), 1190-213.

- Bassino, J., 'Inequality in Japan (1892-1941): Physical Stature, Income and Health', *Economics and Human Biology*, Vol. 4 (No. 1, 2006), 62-88.
- Baten, J., 'Protein Supply and Nutritional Status in Nineteenth Century Bavaria, Prussia and France', *Economics and Human Biology*, Vol. 7 (No. 2, 2009), 165-80.
- , 'Heights and Real Wages in the 18th and 19th Centuries: An International Overview', *Jahrbuch Fuer Wirtschaftsgeschichte*, Vol. 1 (2001), 61-76.
- Bayly, S., *Caste, Society and Politics in India: From the Eighteenth Century to the Modern Age* (Cambridge: Cambridge University Press, 1999).
- Bhagavan, M., *Sovereign Spheres: Princes, Education and Empire in Colonial India* (Delhi: Oxford University Press, 2003).
- Bhatia, B., *Famines in India, 1860-1965* (Bombay: Asia Publishing House, 1967).
- Bideau, A., Desjardins, B., et al., *Infant and Child Mortality in the Past*, (Oxford: Clarendon Press, 1997).
- Bittles, A.H., 'Consanguinity and its Relevance to Clinical Genetics', *Clinical Genetics*, Vol. 60 (2001), 89-98.
- Bittles, A.H., Devi, A.R.R., et al., 'Consanguineous Marriage and Postnatal Mortality in Karnataka, South India', *Man*, Vol. 22 (No. 4, 1987), 736-45.
- Bogin, B., *Patterns of Human Growth*, Second Edition edn (Cambridge: Cambridge University Press, 1999).
- Booth, A., 'Night Watchman, Extractive, Or Developmental States? some Evidence from Late Colonial South-East Asia', *Economic History Review*, Vol. 60 (No. 2, 2007), 241-66.
- Borooah, V., 'Maternal Literacy and Child Malnutrition in India', in M. Pal, P. Bharati, et al. (ed.) *Gender and Discrimination: Health, Nutritional Status and Role of Women in India* (Oxford: Oxford University Press, 2009),
- Bose, S., *Kashmir: Roots of Conflict, Paths to Peace* (Cambridge: Harvard University Press, 2005).
- Bose, S. and Jalal, A., *Modern South Asia: History, Culture, Political Economy* (New Delhi: Oxford University Press, 1999).
- Brennan, L., McDonald, J., et al., 'Long-Term Change in Indian Health', *South Asia: Journal of South Asian Studies*, Vol. 26 (No. 1, 2003), 51-70.
- , 'Towards an Anthropometric History of Indians Under British Rule', *Research in Economic History*, Vol. 17 (1997), 185-246.

- , 'Trends in the Economic Well-being of South Indians Under British Rule: The Anthropometric Evidence', *Explorations in Economic History*, Vol. 31 (No. 2, 1994), 225-60.
- Brown, J., *Modern India: The Origins of an Asian Democracy* (Oxford: Oxford University Press, 1994).
- Burgess, R. and Chaudhary, L., 'State Ownership, Productivity and Colonialism: The Case of Indian Railways', [Online],2010) Available from: http://www2.warwick.ac.uk/fac/soc/economics/intranet/calendar/railways_may_2010-all.pdf (Accessed 17th February 2015).
- Burgess, R. and Donaldson, D., 'Can Openness Mitigate the Effects of Weather Shocks? Evidence from India's Famine Era', *American Economic Review*, Vol. 100 (No. 2, 2010), 449-53.
- Cain, P., and Hopkins, A., *British Imperialism: Crisis and Deconstruction, 1914-1990*, (London: Longman, 1993).
- Cell, J., 'Colonial Rule', in J. Brown and W. Louis (ed.) *the Oxford History of the British Empire, Vol IV: the Twentieth Century* (Oxford:Oxford University Press, 1999)
- Chaudhary, L., 'Land Revenues, Schools and Literacy: A Historical Examination of Public and Private Funding of Education', *Indian Economic Social History Review*, Vol. 47 (No. 2, 2010), 179-204.
- , 'Determinants of Primary Schooling in British India', *Journal of Economic History*, Vol. 69 (No. 1, 2009), 269-302.
- Clark, G. and Wolcott, S., 'One Polity, Many Countries: Economic Growth in India, 1873-2000', in D. Rodrik (ed.) *Frontiers of Economic Growth* (Princeton: Princeton University Press, 2003),
- Clayton, G., *Britain and the Eastern Question: Missolonghi to Gallipoli* (London: London University Press, 1971).
- Clingingsmith, D. and Williamson, J., 'Deindustrialization in 18th and 19th Century India: Mughal Decline, Climate Shocks and British Industrial Assent', *Explorations in Economic History*, Vol.45, No.3, 2008, pp.209-234.
- Coatsworth, J., 'Indispensable Railroads in a Backward Economy: The Case of Mexico', *Journal of Economic History*, Vol. 39 (No. 4, 1979), 939-60.
- Coen, T., *Indian Political Service* (London: Chatto and Windus, 1971).
- Collins, W.J., 'Labour Mobility, Market Integration, and Wage Convergence in Late 19th Century India', *Explorations in Economic History*, Vol. 36 (No. 3, 1999), 246-77.
- Copland, I., *State, Community and Neighbourhood in Princely North India, c1900-1950* (Hampshire: Palgrave Macmillan, 2005).

- , 'The Hyderabad Agreement of 1933: A Case Study in Anglo-Indian Diplomacy', *Journal of Imperial and Commonwealth History*, Vol. 6 (1978), 281-99.
- , *Princes of India in the Endgame of Empire 1917-1947* (Cambridge: Cambridge University Press, 1977).
- Crayen, D. and Baten, J., 'Global Trends in Numeracy 1820-1949 and its Implications for Long-Term Growth', *Explorations in Economic History*, Vol. 47 (No. 1, 2010), 82-99.
- Crimmins, E. and Finch, C., 'Infection, Inflammation, Height, and Longevity', *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 103 (No. 2, 2006), 498-503.
- Cuff, T., *The Hidden Cost of Economic Development: the Biological Standard of Living in Antebellum Pennsylvania*, (Aldershot: Ashgate, 2005)
- Davis, L. and Huttenback, R., *Mammon and the Pursuit of Empire: The Political Economy of British Imperialism 1860-1912*, (New York: Cambridge University Press, 1986).
- Davis, M., *Late Victorian Holocausts: El Nino, Famines and the Making of the Third World* (London: Verso, 2001).
- de Paiva Abreu, M., 'Brazil as a Creditor: Sterling Balances, 1940-1952', *Economic History Review*, Vol. 43 (No. 3, 1990), 450-69.
- Deaton, A. and Arora, R., 'Life at the Top: The Benefits of Height', *NBER Working Paper Series*, Vol. 15090 (2009)
- Deaton, A., 'Height, Health and Inequality: The Distribution of Adult Heights in India', *American Economic Review Papers and Proceedings*, Vol. 98 (No. 2, 2008), 468-74.
- Dell, M., 'The Persistent Effects of Peru's Mining *Mita*', *Econometrica*, Vol. 78 (No. 6, 2010), 1863-957.
- Desai, M., 'Indirect British Rule, State Formation, and Welfarism in Kerala, India, 1860-1957', *Social Science History*, Vol. 29 (No. 3, 2005), 457-88.
- Dirks, N., *the Hollow Crown: An Ethnohistory of an Indian Kingdom* (Ann Arbor: University of Michigan Press, 1993).
- Do, Q., Iyer, S., et al., 'The Economics of Consanguineous Marriages', *World Bank Policy Research Working Paper*, [Online], Vol. 4085 (2006) Available from: <<https://openknowledge.worldbank.org/bitstream/handle/10986/8845/wps4085.pdf?sequence=1>> (Accessed 17th February 2015).
- Donaldson, D., 'Railroads of the Raj: Estimating the Impact of Transportation Infrastructure', *NBER Working Paper Series*, [Online], Vol. 16487 (2010)

Available from: <<http://www.nber.org/papers/w16487>> (Accessed 17th February 2015).

- Doniger, W. and Smith, B., *Laws of Manu* (Harmondsworth: Penguin, 1991).
- Dreze, J. and Sen, A., *Uncertain Glory: India and its Contradictions* (Princeton: Princeton University Press, 2013).
- Dutt, R., *Economic History of India in the Victorian Age* (London, 1904).
- Dyson, T. and Moore, M., 'On Kinship Structure, Female Autonomy, and Demographic Behavior in India ', *Population and Development Review*, Vol. 9 (No. 1, 1983), 35-60.
- Eltis, D., 'Welfare Trends among the Yoruba in the Early Nineteenth Century: The Anthropometric Evidence ', *Journal of Economic History*, Vol. 50 (No. 3, 1990), 521-40.
- Engles, D., 'The Age of Consent Act of 1891: Colonial Ideology in Bengal', *South Asia Research*, Vol. 3 (1983), 107-31.
- Eveleth, P. and Tanner, J., *Worldwide Variation in Human Growth*, Second Edition edn (Cambridge: Cambridge University Press, 1990).
- Ewing, A., 'The Indian Civil Service 1919-1924: Service Discontent and the Response in London and in Delhi', *Modern Asian Studies*, Vol. 18 (No. 1, 1984), 33-53.
- Fenske, J., 'Land Tenure and Investment Incentives: Evidence from West Africa', *Journal of Development Economics*, Vol. 95 (No. 2, 2010), 137-56.
- Ferguson, N. and Schularick, M., 'The Empire Effect: The Determinants of Country Risk in the First Age of Globalization 1880-1913', *Journal of Economic History*, Vol. 66 (No. 2, 2006), 283-312.
- Ferguson, N., *Empire: The Rise and Demise of the British World Order and the Lessons for Global Power* (New York: Basic Books, 2002).
- , 'Imperial Illusions', *New Republic*, 15th February 2008)
- Fisher, M., *Indirect Rule in India: Residents and the Residency System 1764-1858* (New Delhi: Oxford University Press, 1991).
- Floud, R., Gregory, A., et al., *Height, Health and History, Nutritional Status in the United Kingdom, 1750-1980* (New York: Cambridge University Press, 1990).
- Fogel, R., 'Notes on the Social Saving Controversy', *Journal of Economic History*, Vol.39 (No.1, 1979), 1-54
- Frankema, E., 'Colonial Taxation and Government Spending in British Africa, 1880-1940: Maximising Revenue Or Minimising Effort?', *Explorations in Economic History*, Vol. 48 (No. 1, 2011), 136-49.

- , 'Raising Revenue in the British Empire, 1870-1940: How 'Extractive' were Colonial Taxes?', *Journal of Global History*, Vol. 5 (No. 3, 2010), 447-77.
- Fuller, C., 'The Internal Structure of the Nayar Caste', *Journal of Anthropological Research*, Vol. 31 (No. 4, 1975), 283-312.
- Gallagher, J., *the Decline, Revival and Fall of the British Empire: The Ford Lectures and Other Essays* (Cambridge: Cambridge University Press, 2004).
- Gandhi, M., *Hind Swaraj and Other Writings* (Cambridge; Cambridge University Press, 1997).
- Gardner, L., *Taxing Colonial Africa: The Political Economy of British Imperialism* (Oxford: Oxford University Press, 2012).
- Ghurye, G.S., 'Caste and British Rule', in I. Banerjee-Dube (ed.) *Caste in History* (New Delhi: Oxford University Press, 2012)
- Gough, I., *Political Economy of the Welfare State* (London: Macmillan, 1979).
- Gough, K., 'Caste in a Tanjore Village', in E. Leach (ed.) *Aspects of Caste in South India, Ceylon and North-West Pakistan* (Cambridge: Cambridge University Press, 1960)
- Gould, S.J., *The Mismeasure of Man*, (New York: Norton, 1981)
- Guha, R. and Gadgil, M., 'State Forestry and Social Conflict in British India', *Past and Present*, Vol. 123 (No. 1, 1989), 141-77.
- Guntupalli, A. and Moradi, A., 'Gender Dimorphism: Discrimination in Rural India, 1930-1975', in M. Pal, P. Bharati, et al. (ed.) *Gender Bias: Health, Nutrition and Work* (New Delhi: Oxford University Press, 2009)
- Guntupalli, A., '*Anthropometric Evidence of Indian Welfare and Inequality in the 20th Century*', [Online], 2007), 18th February 2015. Available from: <http://tobias-lib.uni-tuebingen.de/volltexte/2007/3023/>
- Guntupalli, A. and Baten, J., 'The Development and Inequality of Heights in North, West, and East India 1915-1944 ', *Explorations in Economic History*, Vol. 43 (No. 4, 2006), 578-608.
- Hardiman, D., 'Baroda: The Structure of a 'Progressive' State ', in R. Jeffrey (ed.) *People, Princes and Paramount Power: Society and Politics in Indian Princely States* (Oxford: Oxford University Press, 1978),
- Heston, A., 'National Income', in D. Kumar (ed.) *the Cambridge Economic History of India* (2vols., Cambridge: Cambridge University Press, 1983),
- Higman, B., 'Growth in Afro-Caribbean Slave Populations', *American Journal of Physical Anthropology*, Vol. 50 (No. 3, 1979), 373-85.

- Horrell, S., Meredith, D. and Oxley, D., 'Measuring Misery: Body Mass, Ageing and Gender Inequality in Victorian London', *Explorations in Economic History*, Vol. 46 (No. 1, 2009), 93-119.
- Huff, G., and Majima, S., 'Financing Japan's World War II Occupation of Southeast Asia', *Journal of Economic History*, Vol. 73 (No.4, 2013), 937-977.
- Huillery, E., 'The Black Man's Burden' the Cost of Colonization of French West Africa', *Journal of Economic History*, Vol. 74 (No. 1, 2014), 1-37.
- , 'History Matters, the Long-Term Impact of Colonial Public Investments in French West Africa', *American Economic Journal: Applied Economics*, Vol. 1 (No. 2, 2009), 176-215.
- Humphries, J. and Leunig, T., 'Cities, Market Integration, and Going to Sea: Stunting and the Standard of Living in Early Nineteenth-Century England and Wales', *Explorations in Economic History*, Vol. 62 (No. 2, 2009), 458-78.
- Hurd, J.M., 'Irrigation and Railways: Railways ', in D. Kumar (ed.) *the Cambridge Economic History of India* (Cambridge: Cambridge University Press, 1983),
- Iyer, L., 'The Long-Term Impact of Colonial Rule: Evidence from India', *Review of Economics and Statistics*, Vol. 152 (No. 4, 2010), 693-713.
- Iyer, S., 'Gender, Religion and the Age at Marriage in India', in M. Pal, P. Bharati, et al. (ed.) *Gender and Discrimination: Health, Nutritional Status and Role of Women in India* (New Delhi: Oxford University Press, 2009),
- Jain, A., *Taxation of Income in India: An Empirical Study since 1939* (Delhi: Macmillan, 1939).
- Jeffrey, K., 'an English Barrack in the Oriental Seas'? India in the Aftermath of the First World War', *Modern Asian Studies*, Vol. 15 (No. 3, 1981), 369-86.
- Jeffrey, R., 'Introduction', in R. Jeffrey (ed.) *People, Princes and Paramount Power: Society and Politics in Indian Princely States* (Delhi: Oxford University Press, 1978),
- , 'Travancore: Status, Class and the Growth of Radical Politics, 1860-1940 ', in R. Jeffrey (ed.) *People, Princes and Paramount Power: Society and Politics in Indian Princely State* (Delhi: Oxford University Press, 1978),
- Jeffrey, R., *Politics, Women and Well-being: How Kerala Became a Model*, (London:MacMillan, 1992).
- , 'How Women made Kerala Literate', *Pacific Affairs*, Vol. 60 (No. 3, 1987), 447-72.
- Jones, M., *Health Policy in Britain's Model Colony: Ceylon 1900-1948* (New Delhi:Orient Longman, 2004).

- Kawashima, K., *Missionaries and a Hindu State: Travancore 1858-1936*, (New Delhi: Oxford University Press, 1998).
- Klein, I., 'Death in India, 1871-1921', *Journal of Asian Studies*, Vol. 32 (No. 4, 1973), 639-59.
- Koepke, N. and Baten, J., 'The Biological Standard of Living in Europe during the Last Two Millennia', *European Review of Economic History*, Vol. 9 (No. 1, 2005), 61-95.
- Komlos, J., 'Access to Food and the Biological Standard of Living: Perspective on the Nutritional Status of Native Americans', *American Economic Review*, Vol. 93 (No. 5, 2003), 252-5.
- , 'Shrinking in a Growing Economy? the Mystery of Physical Stature during the Industrial Revolution', *Journal of Economic History*, Vol. 58 (No. 3, 1998), 779-802.
- , 'The Height and Weight of West Point Cadets: Dietary Change in Antebellum America', *Journal of Economic History*, Vol. 47 (No. 4, 1987), 897-927.
- Krishnamurty, J., 'The Occupational Structure', in D. Kumar (ed.) *the Cambridge Economic History of India* (Cambridge: Cambridge University Press, 1983),
- Kulkarni, M.L. and Kurian, M., 'Consanguinity and its Effect on Fetal Growth and Development: A South Indian Study', *Journal of Medical Genetics*, Vol. 27 (No. 6, 1990), 348-52.
- Kumar, D., 'Colonialism, Bondage, and Caste in British India', in M. Klein (ed.) *Breaking the Chains: Slavery, Bondage, and Emancipation in Modern Africa and Asia* (Madison: University of Wisconsin Press, 1993),
- , 'Agrarian Relations: South India', in D. Kumar (ed.) (2vols., Cambridge: Cambridge University Press, 1983)
- , 'The Fiscal System', in D. Kumar (ed.) (2vols., Cambridge: Cambridge University Press, 1983),
- , *Land and Caste in South India* (Cambridge: Cambridge University Press, 1965).
- , 'Caste and Landlessness in South India', *Comparative Studies in Society and History*, Vol. 4 (1962), 337-63.
- Lal, D., *in Praise of Empires* (New York: Palgrave, 2004).
- , 'Defence of Empires', *Economic Affairs*, Vol. 23 (No. 4, 2003), 14-9.
- Lankina, T. and Getachew, L., 'Competitive Religious Entrepreneurs: Christian Missionaries and Female Education in Colonial and Post-Colonial India', *British Journal of Political Science*, Vol. 43 (No. 1, 2013), 629-50.

- Latham, A. and Neal, L., 'The International Market in Rice and Wheat, 1868-1914', *Economic History Review*, Vol. 36 (No. 2, 1983), 260-80.
- Leake, E., 'British India Versus the British Empire: The Indian Army and an Impasse in Imperial Defence Circa 1919-39', *Modern Asian Studies*, Vol. 48 (No. 1, 2014), 301-29.
- Leonard, K., 'Hyderabad: The Mulki-Non-Mulki Conflict', in R. Jeffrey (ed.) *People, Princes and Paramount Power: Society and Politics in Indian Princely States* (Delhi: Oxford University Press, 1978),
- Lindert, P., *Growing Public: Social Spending and Economic Growth since the Eighteenth Century* (2vols., Cambridge: Cambridge University Press, 2004).
- Mahar, M., *Untouchables in Contemporary India* (Tuscon: Arazona University Press, 1972).
- Manor, J., 'Princely Mysore before the Storm: The State-Level Political System of India's Model State', *Modern Asian Studies*, Vol. 9 (No. 1, 1975), 31-58.
- Mathew, E., 'Growth of Literacy in Kerala: State Intervention, Missionary Initiatives and Social Movements', *Economic and Political Weekly*, Vol. 34 (No. 39, 1999), 2811-20.
- McAlpin, M., 'Price Movements and Fluctuations in Economic Activity 1860-1947', in D. Kumar (ed.) *Cambridge Economic History of India* (2vols., Cambridge: Cambridge University Press, 1983),
- , 'Dearth, Famine, and Risk: The Changing Impact of Crop Failures in Western India, 1870-1920', *Journal of Economic History*, Vol. 39 (No. 1, 1979), 143-57.
- , 'The Effects of Expansion of Markets on Rural Income Distribution in Nineteenth Century India', *Explorations in Economic History*, Vol. 12 (1975), 289-302.
- , 'Railroads, Prices, and Peasant Rationality: India 1860-1900', *Journal of Economic History*, Vol. 34 (No. 3, 1974), 662-84.
- Mehta, U., *Liberalism and Empire: A Study in the Nineteenth-Century British Liberal Thought* (Chicago: University of Chicago Press, 1992).
- Metcalf, T., *Ideologies of the Raj* (Cambridge: Cambridge University Press, 1997).
- Metzer, J., 'Railroad Development and Market Integration: The Case of Tsarist Russia', *Journal of Economic History*, Vol. 34 (No. 3, 1974), 529-50.
- Mitchell, B., *British Historical Statistics* (Cambridge: Cambridge University Press, 2011).
- Moradi, A., 'Confronting Colonial Legacies: Lessons from Human Development in Ghana and Kenya, 1880-2000', *Journal of International Development*, Vol. 20 (No. 8, 2008), 1107-21.

- Morgan, S. and Liu, S., 'Was Japanese Colonialism Good for the Welfare of Taiwanese? Stature and the Standard of Living', *The China Quarterly*, Vol. 192 (2007), 990-1013.
- Morris, M., 'Towards a Reinterpretation of Nineteenth-Century Indian Economic History', *Journal of Economic History*, Vol. 23 (1963), 606-18.
- Mueller, W., 'The Genetics of Size and Shape in Children and Adults', in P. Eveleth and J. Tanner (ed.) *Worldwide Variations in Human Growth* (Cambridge: Cambridge University Press, 1976).
- Northrup, D., *Indentured Labour in the Age of Imperialism 1834-1922* (New York: Cambridge University Press, 1995).
- Nossiter, T., *Communism in Kerala: A Study in Political Adaptation* (Berkeley: University of California Press, 1982).
- Nye, J. *War, Wine and Taxes: The Political Economy of Anglo-French Trade, 1689-1900*, (Princeton: Princeton University Press, 2007)
- O'Brien, P., 'The Costs and Benefits of British Imperialism 1846-1914', *Past and Present*, Vol. 120 (No. 1, 1988), 163-200.
- Occhino, F., Oosterlink, K., and White, E., 'How Occupied France Financed Its Own Exploitation in World War II', *American Economic Review*, Vol.97 (No. 2, 2007), 295-299.
- Offer, A., 'The British Empire, 1870-1914: A Waste of Money?', *Economic History Review*, Vol. 46 (No. 5, 1993), 215-38.
- Ostrom, E., *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge: Cambridge University Press, 1990).
- Ouwerkerk, L. and Kooiman, D., '*No Elephants for the Maharaja: Social and Political Change in the Princely State of Travancore (1921-1947)*', (New Delhi: Manohar.1997)
- Ram, K., *Mukkuvar Women: Gender, Hegemony and Capitalist Transformation in a South Indian Fishing Community* (Sydney: Allen and Unwin, 1991).
- Ramusack, B., *Indian Princes and their States* (Cambridge: Cambridge University Press, 2004).
- Ravallion, M., *Markets and Famines* (Oxford: Oxford University Press, 1987).
- Reserve Bank of India., '*History of the Reserve Bank of India*', [Online], Vol. 1 (, 19th February 2015. Available from: <<http://www.rbi.org.in/scripts/RHvol-1.aspx>>
- Robert, B., 'Economic Change and Agrarian Organisation in 'Dry' South India 1890-1940: A Reinterpretation', *Modern Asian Studies*, Vol. 17 (No. 1, 1983), 59-78.

- Roy, T., 'Economic History and Modern India: Redefining the Link', *Journal of Economic Perspectives*, Vol. 16 (No. 3, 2002), 109-30.
- , *Economic History of India 1857-1947*, 3rd edn (Delhi: Oxford University Press, 2000).
- Rudolph, L. and Rudolph, S., 'Rajputana Under British Paramountcy: The Failure of Indirect Rule', *Journal of Modern History*, Vol. 38 (No. 2, 1966), 138-60.
- Samarendra, P., 'Between Number and Knowledge: Career of Caste in Colonial Census', in I. Banerjee-Dube (ed.) *Caste in History* (Delhi: Oxford University Press, 2008),
- Schultz, T., 'Wage Gains Associated with Height as a Form of Health Human Capital', *American Economic Review*, Vol. 92 (No. 2, 2002), 349-53.
- Sen, A., 'Disputations: More on Imperial Illusions', *New Republic*, Vol. 15th February (2008)
- , 'Imperial Illusions', *New Republic*, Vol. 31st December (2007)
- Sen, A. and Osmani, S., 'The Hidden Penalties of Gender Inequality: Fetal Origins of Ill-Health', *Economics and Human Biology*, Vol. 1 (No. 1, 2003), 105-21.
- Sen, A. and Dreze, J., *India: Economic Development and Social Opportunity* (Oxford: Clarendon Press, 1995).
- , *An Uncertain Glory: India and its Contradictions*, (Princeton: Princeton University Press, 2013)
- Sen, A., *Poverty and Famines: An Essay on Entitlement and Deprivation* (Oxford: Clarendon Press, 1981).
- Singh, P., 'We-Ness and Welfare: A Longitudinal Analysis of Social Development in Kerala, India', *World Development*, Vol. 39 (No. 2, 2010), 282-93.
- Sivaswamy, K., *Food Famine and Nutritional Diseases in Travancore 1943-44* (Trivandrum: Servindia, 1945)
- Spangenberg, B., 'The Problem of Recruitment for the Indian Civil Service during the Late Nineteenth Century', *Journal of Asian Studies*, Vol. 30 (No. 2, 1971), 341-60.
- Srinivas, M., 'The Changing Position of Indian Women', *Man*, Vol. 12 (No. 2, 1977), 221-38.
- , *Social Change in Modern India* (Berkeley: University of California Press, 1966).
- Srinivasan, T., 'Undernutrition: Concepts, Measurement and Policy Implications', in S. Osmani (ed.) *Nutrition and Poverty* (Oxford: Clarendon Press, 1992),

- Steckel, R., 'Heights and Human Welfare: Recent Developments and New Directions', *Explorations in Economic History*, Vol. 46 (No. 1, 2009), 1-23.
- Steckel, R. and Prince, J., 'Tallest in the World: Native Americans of the Great Plains in the Nineteenth Century', *American Economic Review*, Vol. 91 (No. 1, 2001), 287-94.
- Steckel, R., 'Strategic Ideas in the Rice of the New Anthropometric History and their Implications for Interdisciplinary Research', *Journal of Economic History*, Vol. 58 (No. 2, 1998), 803-21.
- Steckel, R. and Floud, R., *Health and Welfare during Industrialization* (Chicago: University of Chicago Press, 1997).
- Steckel, R., 'Stature and the Standard of Living', *Journal of Economic Literature*, Vol. 33 (No. 4, 1995), 1903-40.
- , 'Height and Per Capita Income', *NBER Working Paper*, Vol. 880 (1982)
- Stinson, S., *Human Biology: An Evolutionary and Biocultural Perspective* (New York: John Wiley and Sons, 2000).
- Stokes, E., *English Utilitarians and India* (Delhi: Oxford University Press, 1989).
- Strachey, A. 'Caste, Public Policy and Health: Living Standards in South India 1910-1945', Unpublished MPhil thesis, University of Oxford, 2011.
- Studer, R., 'India and the Great Divergence: Assessing the Efficiency of Grain Markets in Eighteenth- and Nineteenth-Century India', *Journal of Economic History*, Vol. 68 (No. 2, 2008), 393-437.
- Summerhill, W., 'Big Social Savings in a Small Laggard Economy: Railroad-Led Growth in Brazil', *Journal of Economic History*, Vol. 65 (No. 1, 2005), 72-102.
- Sweeny, S., *Financing India's Imperial Railways*, (London: Pickering and Chatto, 2011).
- Thurston, E., *Castes and Tribes of Southern India* (Volume 1 vols., Madras, 1909).
- TIME., 'HYDERABAD: Silver Jubilee Durbar', [Online], Vol. February 22nd 1937 (Available from: <http://www.time.com/time/magazine/article/0,9171,770599,00.html>)
- Tomlinson, B., 'Imperialism and After: The Economy of Empire on the Periphery', in J. Brown and W. Louis (ed.) *the Oxford History of the British Empire, Vol. IV: the Twentieth Century* (4vols., New York: Oxford University Press, 1999),
- , *Political Economy of the Raj 1917-1947* (London: Macmillan, 1979).
- Tripodi, C., *Edge of Empire: The British Political Officer and Tribal Administration on the North-West Frontier 1877-1947* (Burlington: Ashgate, 2011).

- , 'Peacemaking through Bribes Or Cultural Empathy? the Political Officer and Britain's Strategy Towards the North-West Frontier, 1901-1945', *Journal of Strategic Studies*, Vol. 31 (No. 1, 2008), 123-51.
- Tucker, R., 'The Depletion of India's Forests Under British Imperialism: Planters, Foresters, and Peasants in Assam and Kerala', in D. Worster (ed.) *the Ends of the Earth: Perspectives on Modern Environmental History* (Cambridge: Cambridge University Press, 1988),
- United Nations., '*Mysore Population Study*', *Population Studies*, Vol. 34 (1961)
- Varghese, T., *Agrarian Change and Economic Consequences: Land Tenures in Kerala 1850-1960* (Calcutta: Allied Publishers, 1970).
- Waler, H., 'Height Weight and Mortality the Norwegian Experience', *Journal of International Medicine*, Vol. 215 (1984), 1-56.
- Washbrook, D., 'Country Politics: Madras 1880 to 1930', *Modern Asian Studies*, Vol. 7 (No. 3, 1973), 475-531.
- Wavell, A., and Moon, P. (ed.), *Wavell: The Viceroy's Journal*, (Oxford: Oxford University Press, 1973)
- WHO Multicentre Growth Reference Study Group., 'Assessment of Differences in Linear Growth among Populations in the WHO Multicentre Growth Reference Study', *Acta Paediatrica Supplement*, Vol. 450 (2006), 56-65.
- Wood, J., 'Rajkot: Indian Nationalism in the Princely Context: The Rajkot Satyagraha of 1938-9 ', in R. Jeffrey (ed.) *People, Princes and Paramount Power: Society and Politics in Indian Princely States* (Delhi: Oxford University Press, 1978),
- Yanagisawa, H., *A Century of Change: Caste and Irrigated Lands in Tamil Nadu 1860s-1970s* (New Delhi: Manohar, 1996).

Appendix 1: Full list of Variables in the Database

Variable	Geographical Coverage
Year born	All region
Caste	All region
District born	All region
Number of towns in district in 1921	British India
Infant mortality in 1921	British India
Male and female literacy by caste 1890-1931	British India
Proportion of female children aged 0-13 married or widowed by caste in 1931	British India
Princely State Dummy	All region
Population Density	British India
Mean Annual Rainfall	All region
System of Land Tenure (zamindari or ryotwari)	British India and Mysore
Coastal Dummy	All region
Number of Railways in District in Decade of Birth	All region
Modern Incidence of Malaria	All region
No Age Heaping Dummy	All region
Altitude	All region
Longitude	All region
Latitude	All region

Appendix 2: Results of the Railway – Region Regression

Dependent variable: height (mm)

	Specification 1	Specification 2	Specification 3
Constant	709.577**	445.7**	738.230***
Yearborn	0.459***	0.611***	0.452***
CASTE CONTROLS			
Tribal	0.059	-1.823	0.182
Christian	1.285	0.555	2.263
Brahmin	5.877*	9.210***	5.783*
Unclassified Caste	2.169	-1.068	3.050
Muslim	7.818**	8.332***	7.765**
Dalit	-10.804***	-13.124***	-11.139***
High Caste	7.816***	6.737***	7.955***
GEOGRAPHICAL CONTROLS			
Altitude	0.008***	0.005***	0.007***
Latitude	0.533**	0.015	0.379*
Longitude	0.385**	0.017	0.291*
Coast	-1.602	-0.208	-1.656
Malaria	0.591	0.850	0.585
Rainfall	0.008	0.006	-0.037***
REGIONAL CONTROLS			
North East Madras	-	0.707	-
North West Madras	-	-29.255***	-
South East Madras	-	5.601***	-
South Madras	-	-14.586***	-
South West Madras	-	-10.602***	-

Hyderabad	-	-1.325	-
Travancore	-	-8.823***	-
Cochin	-	0.064	-
Mysore	-	2.495	-
Railways	-	-0.092	-
Population Density	-	-	-0.001
RAILWAY REGION CASTE INTERACTIONS			
NE Madras*Tribal*Railway	-2.657***	-3.027***	-2.736***
NW Madras * Tribal * Railway	2.252	1.059	2.311
C Madras * Tribal * Railway	-1.321**	-1.359**	0.968
SE Madras* Tribal* Railway	-2.672*	-2.959*	-0.942
S Madras* Tribal * Railway	-2.340	-3.205	0.155
SW*Tribal *Railway	-20.410***	-19.989***	-20.945**
Mysore*Tribal*Railway	-1.582	-1.816	-1.150
Hyderabad*Tribal*Railway	-3.860***	-3.526***	-3.706**
NE Madras * Dalit * Railway	-0.826	-0.847	1.516
NW Madras * Dalit * Railway	0.128	0.144	-0.044
C Madras * Dalit * Railway	1.130	1.233	2.036
SE Madras * Dalit * Railway	-1.477	-1.644	0.333
S Madras * Dalit * Railway	-0.347	-0.487*	-0.114
SW * Dalit * Railway	-11.474***	-11.461***	-13.665***

Mysore * Dalit * Railway	0.346	0.025	-0.764
Hyderabad * Dalit * Railway	-0.869	-0.731	2.535
Cochin* Dalit * Railway	-36.417***	-37.413***	-47.473***
Travancore * Dalit * Railway	-1.943	-1.267	-1.362
NE Madras * High caste* Railway	0.277	0.316	2.598
NW Madras * High caste * Railway	2.250	2.134	4.673*
C Madras * High Caste * Railway	0.707	0.575	2.222
SE Madras * High caste * Railway	2.277**	2.218 **	1.399
S Madras * High caste * Railway	-0.141	-0.208	0.172
SW Madras * High Caste * Railway	5.939*	5.638 *	6.488
Mysore * High caste * Railway	3.321***	3.376***	7.117***
Hyderabad * High caste * Railway	1.891	1.937	1.291
Cochin * High caste * Railway	-15.796	-13.204	-16.492
Travancore * High caste * Railway	1.063	1.352	-5.803
NE Madras * Muslim * Railway	2.287*	2.169	5.094*
NW Madras * Muslim * Railway	4.366**	4.126**	5.613*
C Madras * Muslim * Railway	-0.074	0.054	2.275
SE Madras * Muslim * Railway	2.322	2.697	0.357

S Madras * Muslim * Railway	-0.450	-0.520	-1.451
SW Madras * Muslim * Railway	6.333***	6.460***	8.308***
Mysore * Muslim * Railway	3.183*	3.266**	0.921
Hyderabad * Muslim * Railway	-0.313	-0.091	4.055*
Cochin * Muslim * Railway	-11.169	-11.425	-13.109
Travancore * Muslim * Railway	-2.430	-2.014	-3.002
NE Madras * Brahmin * Railway	1.133	0.970	1.610
NW Madras * Brahmin * Railway	4.680	4.804*	5.952
C Madras * Brahmin * Railway	2.855*	2.888**	1.185
SE Madras * Brahmin * Railway	2.600*	2.563*	3.442*
S Madras * Brahmin * Railway	0.487	0.605	0.445
SW * Brahmin * Railway	-5.672**	-5.811**	-3.632
Mysore * Brahmin * Railway	1.403	1.431	4.458
Hyderabad * Brahmin * Railway	3.958**	3.898**	6.950
Cochin * Brahmin * Railway	7.333	7.612	8.810
Travancore * Brahmin * Railway	6.350	7.577	5.161
NE Madras * Low Caste * Railway	1.419***	1.398***	1.436**
NW Madras * Low Caste * Railway	-1.196	-1.174	2.677

C Madras * Low Caste * Railway	0.885*	0.934*	0.139
SE Madras * Low Caste * Railway	0.863	0.714	0.829
S Madras * Low Caste * Railway	-0.073	-0.157	-0.359
SW Madras * Low Caste * Railway	4.772***	4.610***	3.747**
Mysore * Low Caste * Railway	5.215***	5.151***	7.827***
Hyderabad * Low Caste * Railway	1.775*	1.966***	2.553**
Cochin * Low Caste * Railway	-7.930	-8.667	-15.048*
Travancore * Low Caste * Railway	-4.366	-3.797	-9.058**
Number of Observations	13315	13315	13315

The intercept refers to Low Caste group in Central Madras.