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Doctoral thesis

The State and Rural Credit Markets in South India, 1930-1960

Author:

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A thesis submitted to the Department of Economic History, of the London School of Economics and Political Science, for the degree of Doctor of Philosophy.

London, August 2020

Declaration

I certify that the thesis I have presented for examination for the PhD degree of the London School of Economics and Political Science is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it). The copyright of this thesis rests with the author. Quotation from it is permitted, provided that full acknowledgement is made. This thesis may not be reproduced without my prior written consent. I warrant that this authorisation does not, to the best of my belief, infringe the rights of any third party.

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- I can confirm that a version of Chapter 5 is forthcoming in *Business History Review.*

Abstract

This thesis contributes to a central theme in the economic history of India: state intervention to protect peasants from market fluctuations, especially, interventions in the credit market. With novel material drawn from the Madras region in late-colonial and early post-colonial times, the thesis asks why unregulated credit markets did not supply enough credit and why regulations exacerbated the problem. Private moneylenders controlled the supply of rural credit in colonial India. Officials believed that rich moneylenders exploited poor peasants in non-competitive credit markets, raising borrowing costs and default rates, restricting investment and widening rural inequality. Based on that understanding, governments in the provinces enforced laws to protect borrowers. The government in Madras adopted two policy approaches to rural credit that were specific to the province. First, from 1904 it established cooperative banks to compete with private lenders. Second, from 1937 it enforced an artificial price ceiling on loans from moneylenders.

This thesis aims to show that intervention failed owing to the nature of the agricultural economy and the political-economic ideology that privileged equity over efficiency. The first and second substantive chapters critically discuss the view, voiced by government officials and some historians, that exploitation drove high borrowing costs and defaults. By looking at the costs borne by the moneylender, the chapters show that the frequency of crop failure and inefficient courts explain restricted credit supply as well as default and interest rate patterns. The third chapter evaluates the impact of credit intervention and demonstrates that the price ceiling failed to deliver equity gains and triggered losses in market efficiency as credit supply contracted and moneylenders evaded the law. The outcome was limited credit supply and lending at illegal rates of interest. The fourth chapter analyses the performance of cooperative banks in rural Madras. The chapter shows that regulatory design explains the failure of the cooperative model. The rich refused to cooperate with the poor while bank managers embezzled and falsified accounts.

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The PhD was a pipe dream in 2014. I suffered a brain contusion one month into my Master's degree in Cambridge and requested an interruption from my studies to recover. I spent my time away reading books and developing a keen interest in South Asian economic history. I always had an academic curiosity, but it was in this year that I realised how curious I actually was. When I re-started my Master's degree in 2015, I attended university with a host of unanswered questions and the resolve to embark on a research journey that would answer at least some of these questions. I started this journey in 2016 but reaching the stage of completion would not have been possible without the teaching and support of so many along the way.

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Chapter 1. Introduction

The study of agricultural markets is central to understanding economic development in colonial India. Two-thirds of the Indian population relied on cultivation to make a living, a figure that did not change much until the latter decades of the twentieth century.[1] Colonial India spanned an enormous territory, with long coastlines in the east and west as well as mountain ranges in the north and south. Rivers emanating from the mountains run through fertile valleys in the north and, albeit to a smaller extent, in the south. The vast majority of India's population cultivated on four land forms: coastal plains, dry hinterland, fertile valleys and terraced hills. Colonial Madras was no different. Madras spanned from the southern tip to the Deccan Plateau, which bridged south and central India. Laterally, the province ran from the western to the eastern coastline. Hill ranges ran across central areas in the north and south of the province. Three main rivers flowed from the west to the east, with its main tributaries also culminating downstream in the eastern deltas. The Madras province, geographically speaking, was a microcosm of the Indian sub-continent while its size, covering 48,500 square miles and housing 29 million people in 1950, justifies studies of the region as its own entity.[2] Agriculture employed millions but yielded low and unequal output in Madras, as it did with the rest of colonial India.

Scholars studying the economic history of India agree that growth and productivity stagnated in the agricultural sector throughout the colonial period and until 1960, an estimated year for the beginning of the Green Revolution.[3] Agrarian India did experience growth in commerce and trade during the nineteenth century. Transport infrastructure improved, markets developed and cultivators shifted from payments in kind to transactions in cash.[4] Households transitioned from

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[1] Tirthankar Roy, *The Economic History of India, 1857-1947*, (Oxford, 2000), 104.

[2] Christopher Baker, *An Indian Rural Economy 1880-1955: The Tamilnad Countryside*, (Oxford, 1984), 3.

[3] This view is presented in general accounts on Indian economic history and in national income estimates. For general accounts, see Dietmar Rothermund, *An Economic History of India : From Pre-colonial times to 1991* (London, 1993); B. R. Tomlinson, *The Economy of Modern India, 1860-1970*, (Cambridge, 1996); Roy, *Economic History of India*. For national income estimates, see A. Heston, "National Income." In *The Cambridge Economic History of India*, 376-462, (Cambridge, 1983); S. Sivasubramonian, *National Income of India in the Twentieth Century*, (Oxford, 2000).

[4] On railroads and development in colonial India, see John Hurd, "Railways and the Expansion of Markets in India, 1861–1921" *Explorations in Economic History* 12, no. 3 (1975): 263-88; Dan Bogart and Latika Chaudhary, "Engines of Growth: The Productivity Advance of Indian Railways, 1874-1912." *The Journal of Economic History* 73, no. 2 (2013): 339-70; Dave Donaldson, "Railroads of the Raj: Estimating the Impact of Transportation Infrastructure." *American Economic Review* 108, no. 4-5, 899-934.

subsistence to cultivation for profit as cash crop acreage saw a steady increase. However, these changes did not lead to growth in the agricultural sector. Through this long stagnation, real incomes grew modestly and innovation was limited as production processes remained trapped in a low-yielding regime. Output was volatile with some years of mass famine.[5]

Why did agricultural productivity and per capita growth remain low? One interpretation of the problem holds that rural elites captured the gains from commercialisation, restricting the investment potential for peasants, increasing the concentration of capital and driving rising inequality.[6] Inequality and elite power did matter. However, a general account of agrarian development based on elite power alone is difficult to sustain, among other reasons because such an account underestimates the role of ecology, risks and institutional responses to risks. Focusing on rural credit markets, the thesis contributes to a revisionist view in the economic history of India, one that considers geographical constraints, weak institutions and ineffectual policy to explain low investment and underdevelopment in colonial India.[7]

Credit is a key feature of economic development. Suppliers of goods and services need credit to produce or improve efficiency through innovation. Consumers use credit to purchase goods and services. Two streams of credit providers exist in the economy. Commercial private and nationalised banks are formal suppliers of credit while individuals and group lending organizations are informal suppliers of credit. Typically, the distinction between formal and informal lies in regulation. The informal credit market is unregulated, while the formal credit market operates within the guidelines of laws and administrative procedures. In most cases, both streams of credit supply exist simultaneously, servicing different consumers and markets.

Early to mid-twentieth century rural India presents a useful case study of credit. Agriculture was the largest sector in terms of labour share employed. Yet, commercial banks did not lend in the region. Individuals and cooperatives were the major suppliers of credit in agricultural India,

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[5] Tomlinson, *The Economy of Modern India,* 48, estimates 16 million deaths as a result of famines between 1860 and 1900. Famines in 1876, 1896 and 1899 were prolonged and had a significant impact on most Indian provinces. The famine in 1943 was significant but had the largest impact on the Bengal Presidency. For general works on Indian famines, see Elizabeth Whitcombe, *Agrarian Conditions in Northern India*, (Berkeley, 1972); David Hall-Matthews, *Peasants, Famine and the State in Colonial Western India*, (New York, 2005).

[6] For general works on peasant exploitation, see Eric Stokes, *The Peasant and the Raj : Studies in Agrarian Society and Peasant Rebellion in Colonial India*, (Cambridge, 1978); Amiya Kumar Bagchi, *The Political Economy of Underdevelopment*. (Cambridge, 1982); Peter Robb, *Rural India: Land, Power and Society under British Rule*, (London, 1983).

[7] On geography and economic development, see Tirthankar Roy, "Geography or Politics? Regional Inequality in Colonial India." *European Review of Economic History* 18, no. 3 (2014): 324-48; Sunil Amrith, *Unruly Waters*: *How Rains, Rivers, Coasts and Seas have Shaped Asia's History*, (New York, 2018); Tirthankar Roy, "Climate and the Economy in India". *CAGE Working Paper Series*, no. 445 (2019). On institutions and state in economic development in India, see David A. Washbrook, "Law, State and Agrarian Society in Colonial India." *Modern Asian Studies* 15, no. 3 (1981): 649-721; Abhijit Banerjee and Lakshmi Iyer. "History, Institutions, and Economic Performance: The Legacy of Colonial Land Tenure Systems in India." *American Economic Review* 95, no. 4 (2005): 1190-213; Akhil Gupta, *Red Tape : Bureaucracy, Structural Violence, and Poverty in India*, (Durham, 2012).

the former being more predominant during the period. The absence of commercial banks did not mean that the market operated informally. Colonial and post-colonial administrators attempted to regulate, with unintended consequences, the individuals and cooperatives that supplied rural credit. The actions of private moneylenders, and the state's attempt to regulate these, are central to discussion on enterprise, investment and economic growth in the colonial and early post-colonial period.

Subscribing to the elite capture narrative, some historians argue that market failure in rural credit drove low growth and underdevelopment in rural India.[8] In this version of events, rich moneylenders monopolised credit markets and extracted rents from poor peasants. Costs of borrowing were high, constraining credit access and restricting investment potential for the poor. While the facts are not in dispute, an equally plausible explanation for these facts based on market structure and costs of credit could exist too, one that places equal weight upon the borrower's situation and the lender's reason to act in a certain way. This dissertation asks the question: Why was it difficult for lenders to provide credit to peasants in colonial India? In answering this question, the study shows that the exploitation narrative alone does not explain high borrowing costs and low investment. The problem needs to be contextualised against the environmental, institutional and political conditions that impinged on both the borrower and the lender.

1.1 Development Economics and Rural Credit

Theoretical literature on market structure and credit pricing motivate the research questions asked in this thesis. Development economists writing from the 1970s disagreed on which theory best captures the market structure of rural moneylending in India. On the one hand, economists subscribing to a Marxist approach argued that informal credit markets were subject to elite capture.[9] Individual rich landlords monopolised village credit markets, exploiting poor peasant borrowers through high interest rates and one-sided sharecropping arrangements. On the other hand, economists subscribing to alternative market-based models argued that the credit problem

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[8] This literature is reviewed in the 'Historiography' section. For the application of the elite capture narrative to provincial case studies in colonial India, see Sugata Bose, *Credit, Markets, and the Agrarian Economy of Colonial India*, (New York, 1994).

[9] Scholars presented this view in an extensive discussion on the 'agrarian question in India.' See Amit Bhaduri, "A Study in Agricultural Backwardness Under Semi-Feudalism." *The Economic Journal* 83, no. 329 (1973): 120-37; Amit Bhaduri, "On the Formation of Usurious Interest Rates in Backward Agriculture." *Cambridge Journal of Economics* 1, no. 4 (1977): 341-52; Alice Thorner, "Semi-Feudalism or Capitalism? Contemporary Debate on Classes and Modes of Production in India." *Economic and Political Weekly* 17, no. 50 (1982): 1993-999; Utsa Patnaik, "The Agrarian Question and Development of Capitalism in India." *Economic and Political Weekly* 21, no. 18 (1986): 781-93.

did not lie with a monopolistic market structure.[10] Moneylenders faced high costs in supplying credit which filtered into the type of credit arrangements adopted. Both groups published extensively on contemporaneous Indian credit markets, while the history of rural credit in colonial and early post-colonial India was comparatively under-researched in this scholarship.

Economists focus on explaining one key problem in undeveloped, informal credit markets. The price of credit was high, causing high default rates. The argument put forward by Marxist economists suggests that local elites used market power to arbitrarily charge high interest rates. In doing so, rich lenders held poor borrowers in forms of debt-bondage, when the latter expectedly defaulted on high priced loans.[11] In the Marxist interpretation, rural credit markets were non-competitive. Richer cultivators increased the concentration of capital by monopolising local credit markets and extracting from poorer peasants. In this context, creditors were unwilling to invest in land improvement and moneylender power translated to stagnation in output growth and growing inequality in the agrarian economy.

The opposing view, developed through field work across villages in the 1970s and 1980s, presented an alternative market structure of rural credit in India.[12] In this interpretation, markets were not always non-competitive. There were many lenders in some villages while richer peasants also borrowed on the informal market. The poorer borrowers repaid loans through labour, in various sharecropping arrangements, but were not tied to landlords permanently. Indeed, scholars argued that seasonal migration was a common feature for tenant and unskilled labourers. The credit arrangement lasted seasonally rather than through more permanent forms of bondage. If weak market competition and exploitation was not the problem, then what explains the high costs of borrowing in informal credit markets?

Development economists established an extensive framework on risk and the costs of providing credit. Scholars suggest that credit markets function efficiently if the price of credit matches the cost of lending.[13] Lenders price credit accounting for three factors. First, lenders

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[10] Clive Bell, "Chapter 16 Credit Markets and Interlinked Transactions." In *Handbook of Development Economics*, 763-830. Vol. 1. Elsevier B.V, 1988; Pranab K. Bardhan, "Interlocking Factor Markets and Agrarian Development: A Review of Issues." *Oxford Economic Papers* 32, no. 1 (1980): 82-98. Kaushik Basu, "Exploitation and Efficiency." *Economic and Political Weekly* 24, no. 28 (1989): 1554.

[11] This is the main message of Bhaduri's work on semi-feudalism and rural credit markets in West Bengal.

[12] See Pranab K Bardhan and Ashok Rudra. "Terms and Conditions of Sharecropping Contracts: An Analysis of Village Survey Data in India." *The Journal of Development Studies* 16, no. 3 (1980): 287-302; Avishay Braverman and Joseph E. Stiglitz. "Sharecropping and the Interlinking of Agrarian Markets." *The American Economic Review* 72, no. 4 (1982): 695-715.

[13] Bottomley's seminal work on rural credit pricing shows that prices were high to account for the costs of lending. Bottomley presents two hypotheses. First, the 'Lender's Risk Hypothesis' states that creditors priced loans accounting for a higher default risk in rural areas. Second, Bottomley argues that the high costs of approaching courts, which was especially important given the high chance of default, needed to be factored into credit prices. This thesis engages with these concepts in chapters 1 and 2. Bottomley's theories are published in, Anthony Bottomley, "The Premium

contend with information costs, or the costs of determining the creditworthiness of borrowers.[14] These costs are low in localised markets where lenders and borrowers belong to the same village. As such, information costs are not a prominent feature of studies on informal credit markets that are self-contained at the village level.[15] Second, creditors contend with enforcement costs, or the costs of enforcing punishments on borrowers should they default.[16] Courts, for example, present a set of costs that lenders factor in to the price of credit. Accounting for these costs either lead to high-priced loans or creditors adopting low-cost methods of enforcement. Third, creditors account for natural and commercial risk.[17] In the agrarian context, climate volatility, natural disasters and price fluctuations are drivers of default risk. Unpredictable rainfall patterns and a high frequency of crop failures lead to unpredictable default rates in rural credit. Unable to predict this default risk, lenders increase the lower and upper band of interest rates on rural loans.

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for Risk as a Determinant of Interest Rates in Underdeveloped Rural Areas." *The Quarterly Journal of Economics* 77, no. 4 (1963): 637-47. Anthony Bottomley, "Interest Rate Determination in Underdeveloped Rural Areas." *American Journal of Agricultural Economics* 57, no. 2 (1975): 279-91.

[14] Joseph E. Stiglitz, "Chapter 5 Economic Organization, Information, and Development." In *Handbook of Development Economics*, 93-160. Vol. 1. Elsevier B.V, 1988; Irfan Aleem, "Imperfect Information, Screening, and the Costs of Informal Lending: A Study of a Rural Credit Market in Pakistan." *The World Bank Economic Review* 4, no. 3 (1990): 329-49; Richard Arnott, Bruce Greenwald and Joseph E Stiglitz. "Information and Economic Efficiency." *Information Economics and Policy* 6, no. 1 (1994): 77-82.

[15] Parikshit Ghosh and Debraj Ray. "Information and Enforcement in Informal Credit Markets." *Economica* 83, no. 329 (2016): 59-90. Information costs were low in the rural credit market in colonial India. See Chapter 2.

[16] High information and enforcement costs allow borrowers to strategically default on loans. If these costs are high, then lenders do not possess enough information on the creditworthiness of borrowers and are unable to leverage on an administrative structure to compel the borrower to repay loans. Borrowers, as a result, have the power to choose not to repay loans despite having the resources to make these repayments. On enforcement and informal credit, see Sagrario L Floro and Pan A Yotopoulos, *Informal Credit Markets and the New Institutional Economics : The Case of Philippine Agriculture*, (Boulder, 1991); Ethan Bueno De Mesquita and Matthew Stephenson, "Legal Institutions and Informal Networks." *Journal of Theoretical Politics* 18, no. 1 (2006): 40-67.

[17] See Subrata Ghatak, "Rural Interest Rates in the Indian Economy." *The Journal of Development Studies* 11, no. 3 (1975): 190-201. Ghatak discusses four types of credit risk. Natural Risk is driven by bad weather. Technical Risk is driven by failures in farming techniques and storage. Commercial Risk is driven by unpredictable commodity price fluctuations. Financial Risk is driven by the borrower's ability to strategically default.

Table 1.1 Summary of theories on credit pricing

Risk Factor	*Price Mechanism*
Exploitation	Monopolists exploit peasants through predatory pricing.
Information	Poor knowledge of borrower profiles drives up prices.
Enforcement	High cost of enforcing repayments priced in loans.
Natural	Likelihood of crop failure raises equilibrium prices.

While economists disagree on the causes, they agree that expensive credit is sub-optimal for the economy. High borrowing costs constrain investment and increase default rates. However, the solution is not clear.[18] The market, left to its own devices, would not make the desired impact. State intervention could provide the necessary improvement. The disagreement among economists poses a difficult set of questions to the policymaker. If governments believe the exploitation narrative, targeted intervention through artificial price ceilings or establishing market competition via encouragement to cooperatives should solve the problem. However, structural problems that reflect institutional or environmental conditions motivate a different set of policy responses. Under these circumstances, the state could invest in public goods that improve market efficiency. For example, more efficient and less expensive court proceedings reduce the costs borne by moneylenders, which they transmit to lower interest rates. Similarly, governments could invest in improving irrigation infrastructure to increase protection against weather shocks.[19]

As the rest of this chapter will suggest, this literature on the role of credit markets in economic development process suggests a number of parameters that are potentially relevant for an analysis on colonial-era credit intervention.

[18] For problems in identifying market failure in rural credit and the impact of this on policymaking, see Timothy Besley, "How Do Market Failures Justify Interventions in Rural Credit Markets?" *The World Bank Research Observer* 9, no. 1 (1994): 27-47.

[19] Crop insurance is another response to climate volatility. However, crop insurance did not function well in the Indian context because risk was difficult to measure. There is a brief discussion of crop insurance in Chapter 2.

1.2 Historiography of Rural Credit in India

Key policymakers in the colonial government took an active interest in, and published articles and books on, rural credit from the 1870s. The Deccan Riots in 1875 motivated policymakers to reflect on credit exploitation, peasant uprisings and the resulting threat to political legitimacy in the countryside. S. S. Thorburn wrote in the 1880s about credit exploitation in Punjab.[20] Thorburn argued that rich Hindu moneylenders, as 'large unscrupulous businessmen', extracted from poor Muslim peasants, placing them in 'a state of praedial slavery.'[21] According to Thorburn, this led to communal conflict and weak rural development. Thorburn famously criticised the colonial government for establishing an elite-favouring land tenure system and not intervening to protect poor peasants from exploitation. This book motivated a group of economists and political administrators to develop a keen interest in rural credit in colonial times.

Government officials believed that problems in rural credit were caused by cultural characteristics unique to lenders and borrowers in India. These accounts suggest that moneylenders deviously exploited borrowers, through the charging of high interest rates in manipulated contracts and account books, taking advantage of the latter's illiteracy. Writing on credit in 1920s Punjab, Malcolm Darling recognized that increasing debt signalled rising prosperity in peasants but presented two problems of the nature of borrowing in India.[22] First, rich moneylenders extracted rents from poor borrowers with varying degrees of exploitation. Darling grouped moneylenders into sub-categories of community and caste, including *Banias, Khatris* and *Aroras*, placed in order of the degree of exploitation they inflicted on poor peasants. Second, Darling believed that lenders could exploit borrowers because peasants were illiterate and unthrifty.[23] According to Darling, peasants borrowed primarily to consume rather than invest in land improvement. In Darling's view, borrowers spent high priced credit on expensive ceremonies after which the small-scale nature of their husbandry forced them to default on these loans.

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[20] Septimus Smet Thorburn joined the Indian Civil Service in 1863. Thorburn was a civil servant until 1899, spending most of this tenure in the Punjab province. Thorburn's notable positions included the Commissioner of Rawalpindi and the Financial Commissioner of the Punjab.

[21] Septimus Smet Thorburn, *Musalmans and Money-lenders in the Punjab*, (London, 1886), 55.

[22] Malcolm Lyall Darling, educated at Kings College Cambridge, joined the Indian Civil Service in 1904. Until retirement in 1940, Darling spent most of his civil service tenure working on rural finance policies in the Punjab province. Darling held influential positions as the Registrar of Cooperatives between 1927 and 1930 as well as Chairman of the Punjab Land Revenue Board between 1938 and 1940. Darling's book differed from other colonial accounts as it argued that indebtedness in itself was not bad for the rural economy. Peasants, according to Darling, need to borrow to be prosperous. This book is widely cited by contemporary scholars working on the topic.

[23] Malcolm Darling, *The Punjab Peasant in Prosperity and Debt*, (Bombay, 1947).

Other colonial administrators echoed Darling's findings. Colonial officials commonly believed that default rates were high due to a lack of 'thrift', 'prudence' and in some cases 'laziness' among cultivators. C F Strickland, for example, argued that illiteracy in the peasantry drove the problems in rural credit.[24] According to Strickland, 'the Indian peasant thus moves in a vicious circle: he is indebted because he is illiterate, unhealthy, and unprogressive in his agricultural business, and he will make no serious effort toward progress or improvement so long as his higher earnings add nothing to the sum available for his own use.'[25] Strickland suggested that illiteracy combined with a non-enterprising culture led to high default rates, low investment and weak rural development.

News articles from the late nineteenth and early twentieth century cited similar cultural drivers of problems in rural credit. Commenting on similarities in Egypt and India in the 1890s, *The Spectator* suggested that moneylending was a driver of, 'waste, misery and injustice', among the poor peasants in agriculture.[26] In an article titled, 'India's "Dumb Millions,"' the *Times of India* interviewed the political administrator Francis Skrine. In the article, Skrine suggested that, 'thrift, however, is not a characteristic of the Dacca peasant, any more than it is of his brethren elsewhere, and all his surplus and sometimes a great deal more, is absorbed, as a general rule, by his fatal passion for costly ceremonials.'[27] Political administrators in colonial India, thus, contextualised the rural credit problem in images of evil but clever moneylenders exploiting uneducated, gullible and indolent peasants.

Economists and nationalists in the late-colonial Indian government extended the exploitation argument but blamed the state for the persistence of elite capture in rural credit. In agreement with Thorburn's analysis, they argued that the colonial government enforced policies that allowed rich landowners and moneylenders to exploit poor peasant borrowers. Key writings of Indian nationalists in the early twentieth century, including Dadabhai Naoroji, Romesh Chunder Dutt and Gopal Krishna Gokhale, argued that British administrators pursued elite favouring policies

[24] Claude Francis Strickland joined the Indian Civil Service soon after graduating from New College, University of Oxford. Similar to Darling, Strickland spent much of his service working on rural finance and development in Punjab. Strickland was also Registrar of Cooperatives in the province. Strickland is most cited for works on cooperatives in India and Africa. In the Indian case, Strickland's paper in the *Quarterly Journal of Economics* is one of the first pieces of academic writing on credit cooperatives in India.

[25] C F Strickland, "Coöperation and the Rural Problem of India." *The Quarterly Journal of Economics* 43, no. 3 (1929), 513.

[26] *Moneylending in the East,* The Spectator, 15 February 1896.

[27] *India's "Dumb Millions"* The Times of India, 23 January 1893. Francis Henry Skrine joined the Indian Civil Service in 1868. Skrine joined commissions to support famine relief in Bihar and Madras in the 1870s. Skrine spent the 1890s in the customs revenue department in Calcutta prior to retiring in 1897.

through regressive taxation laws.[28] This criticism was a part of their quest for policy reform on the grounds that colonial laws worsened rural poverty. Weak intervention to protect peasants, the nationalists argued, perpetuated elite capture in agrarian markets and increased the number of starving peasants. The third substantive chapter of this thesis suggests that economists and policymakers in the Madras legislature, such as P J Thomas, K G Sivaswamy and C Rajagopalachariar voiced similar concerns in the 1930s and 1940s.[29] Many of these key provincial and national actors joined organizations promoting socialist policies in India. Gokhale founded the left-leaning Servants of India Society, an organization that Sivaswamy joined later in the twentieth century. Others, including Thomas and Rajagopalachariar, held key positions in India's socialist government in the post-colonial period.

Historians build on the studies conducted by colonial officers, economists and nationalists to explain the mechanism by which exploitation in credit markets drove rural inequality. Scholars study rural credit to question whether agrarian exchange transitioned from feudal to capitalist production methods in the colonial period. Indeed, credit forms an important aspect in the extensive political-economy debates on the 'modes of production' and 'agrarian relations' in colonial India. Historians engaging in this debate ask one key question. Neeladri Bhattacharya, in framing the context for research on rural credit in colonial Punjab, summarises this question. On analysing estimations of a rise in borrowing in colonial Punjab, Bhattacharya asks, 'Is this evidence of the common view of colonial agriculture: that usury being profitable diverted capital away from production, that a mass of impoverished peasants was inextricably integrated into a cycle of forced commerce, subordinated to the power of the trader money-lender?'[30]

Historians engaged in peasant studies analyse control and concentration of ownership in factor markets to show that elite capture persisted in the countryside throughout the colonial period. According to this interpretation, the rich owned the majority of land, monopolised capital markets and were monopsonists in the labour market, capturing the benefits of commercialisation and leading to rising inequality in the nineteenth and early-twentieth century. However, historians present different pathways in which high capital concentration led to peasant exploitation. Historians disagree with colonial officials and nationalists that credit exploitation persisted solely

[28] Dadabhai Naoroji, *Poverty and Un-British Rule in India*, (London, 1901); Romesh Chunder Dutt, *Indian Famines : Their Causes and Prevention*, (London, 1901); Gopal Krishna Gokhale, *Speeches of the Honourable Mr. G. K. Gokhale, C. I. E.* (Madras, 1908).

[29] Biographies of some key policymakers writing on rural credit in Madras are presented in the Sources and Methodology section of this chapter. This section also summarises the content in these accounts and their contribution to the thesis.

[30] Neeladri Bhattacharya, "Lenders and Debtors: Punjab Countryside, 1880-1940." *Studies in History* 1, no. 2 (August 1985), 305.

through land transfers. They suggest that lenders infrequently used mortgage instruments and the land market was less active in the nineteenth century, than originally perceived by policymakers.[31] Instead, scholars argue that rich landowners, through the control on credit supply, forced peasants into forms of labour bondage. The argument broadly states that rich landowners forced smallholders to part with their produce at low costs, and coerced tenants and labourers into low-wage employment following defaults on expensive loans.

General studies on the socio-economic relationship between rich and poor peasants in colonial India, such as those by Eric Stokes and Amiya Kumar Bagchi, highlight this dual debt and labour bondage across India.[32] Several scholars apply this concept to studies of agriculture in the provinces. P J Musgrave, Shahid Amin and Shireen Moosvi discuss usury and peasant employment in the United Provinces.[33] Sugata Bose wrote an influential book on the impact of capital concentration and usury on peasant employment in Bengal.[34] Arupjyoti Saikia argues that the end of colonialism did not change the structure of usury and exploitation in credit markets in Assam.[35] David Hardiman presents a similar argument on moneylenders and usury in Western India, the Gujarat state in contemporary India. Extending Darling's analysis of Punjab, David Cheesman writes that *Bania* moneylenders monopolised credit markets and held peasants in persistent debt bondage in the Sind province. According to Cheesman, 'It made little difference whether a man was thrifty or profligate, whether he needed money to improve his estate or celebrate a wedding. Once indebted to a *bania*, it was difficult for him to avoid being caught up in a vicious circle, whereby debts generated more debts.'[36] This summarises the development of the narrative on rural credit markets, from commentators writing in the colonial period to historians engaging in the

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[31] Literature on different provinces shows that land transfers through credit defaults were lower in the nineteenth and twentieth century than perceived by colonial policymakers. For this analysis on colonial Bombay, I J Catanach, *Rural Credit in Western India, 1875-1930 : Rural Credit and the Co-operative Movement in the Bombay Presidency*, (Berkeley, 1970). For credit and land transfers in Punjab, see Bhattacharya, 'Lenders and Debtors'; M Mufakharul Islam, "The Punjab Land Alienation Act and the Professional Moneylenders." *Modern Asian Studies* 29, no. 2 (1995): 271-91. For credit and land in colonial Madras, see Dharma Kumar, "Landownership and Inequality in Madras Presidency: 1853-54 to 1946-47." *The Indian Economic & Social History Review* 12, no. 3 (January 1975): 229–61; K A Manikumar, *A Colonial Economy in the Great Depression, Madras (1929-1937)*, (Chennai, 2003).

[32] Stokes, *The Peasant and the Raj*; Amiya Kumar Bagchi, *Colonialism and Indian Economy*, (New Delhi, 2010).

[33] P J Musgrave, "Rural Credit and Rural Society in the United Provinces 1860-1920", In *The Imperial Impact*, ed. Clive Dewey and A. G. Hopkins, London, 1978; Shahid Amin, *Sugarcane and Sugar in Gorakhpur : An Inquiry into Peasant Production for Capitalist Enterprise in Colonial India*, (Delhi, 1984); Shireen Moosvi, "The Rural Moneylender, 1888: The Dufferin Report for West UP." *Studies in People's History* 6, no. 2 (2019): 170-75.

[34] Bose, Sugata. *Peasant Labour and Colonial Capital : Rural Bengal since 1770*, (Cambridge, 1993).

[35] Arupjyoti Saikia, "The Moneylenders and Indebtedness: Understanding the Peasant Economy of Colonial Assam, 1900–1950." *Indian Historical Review* 37, no. 1 (2010): 63-88.

[36] David Cheesman, "'The Omnipresent Bania:' Rural Moneylenders in Nineteenth-Century Sind." *Modern Asian Studies* 16, no. 3 (1982), 462.

agrarian modes of production debate. The former pointed to extractive lenders and imprudent peasants. The latter disputed the imprudence narrative and expanded the exploitation narrative.

Research on commercialisation in colonial South India presents similar findings. Works by A Satyanarayana and D Rajasekhar focus on the impact of commercialisation on credit and inequality. The authors suggest that the rich benefitted from the expansion in commerce during the nineteenth and early twentieth century. By deploying profits to the credit market as moneylenders, Satyanarayana argues that inequality rose as the rich expanded wealth while the poor remained in debt.[37] Rajasekhar suggests that rich moneylenders in the Kurnool district, 'squeezed credit, hiked rates of interest and demanded repayment of previous debts.'[38] Taking a different approach, studies by David Ludden provide greater political agency to poor peasants. Through a detailed study of the Tirunelveli district in South India, Ludden argues that poor peasants actively participated in the colonial economy and shaped agrarian capitalism in the region.[39] However, critics of Ludden's work argue that rural India needs to be analysed in a top-down rather than bottom-up framework.[40] Credit and inequality needed to be analysed in the context of government and law-making.

In the dominant narrative of elite capture in agrarian markets, there is agreement among historians that weak intervention facilitated peasant exploitation in the nineteenth century while laws more strongly protecting borrowers, labourers and tenants in the twentieth century saw some reversal in rural inequality. According to Hardiman, usury persisted while the colonial government empowered rich landowners to collect taxes from poor peasants. Hardiman suggests that state intervention in rural credit markets led to a decline in the 'hegemonic power' of the moneylender in the early twentieth century.[41] The decline in usury in Western India followed strong state intervention in the twentieth century. Studies by Neil Charlesworth and Peter Robb focus on the role of the colonial state in the politics and economics of agrarian India.[42] The authors argue that land laws favouring rich landlords as well as the weak protection of poor tenants and labourers led

[37] A Satyanarayana, "Commercialisation, Money Capital and the Peasantry in Colonial Andhra, 1900-1940" In *The South Indian Economy: Agrarian Change, Industrial Structure and State Policy c. 1914-1947*, ed. Sabyasachi Bhattacharya, Sumit Guha, Raman Mahadevan, Sakti Padhi, D. Rajasekhar and G. N. Rao, (Oxford, 1991).

[38] D Rajasekhar, "Commercialisation of Agriculture and Changes in Distribution of Land Ownership in Kurnool District of Andhra (c.1900-50)", In *The South Indian Economy: Agrarian Change, Industrial Structure and State Policy c. 1914-1947*, ed. Sabyasachi Bhattacharya, Sumit Guha, Raman Mahadevan, Sakti Padhi, D. Rajasekhar and G. N. Rao, (Oxford, 1991), 90.

[39] David Ludden, *Peasant History in South India*, (Princeton, 1985).

[40] Sugata Bose's review of Ludden's book summarises this criticism. See, Sugata Bose, *The American Historical Review* 92, no. 4 (1987): 1019-020.

[41] David Hardiman, *Feeding the Baniya: Peasants and Usurers in Western India*, (Delhi, 1996).

[42] Neil Charlesworth, *Peasants and Imperial Rule: Agriculture and Agrarian Society in the Bombay Presidency, 1850-1935*, (Cambridge, 1985); Peter Robb, *Peasants, Political Economy, and Law.* (New York, 2007).

to the persistence of inequality in factor markets. Agreeing with Hardiman, Charlesworth and Robb also suggest that the more interventionist state in the late-colonial period left fewer peasants in cycles of debt and labour bondage than before.

Studies by David Washbrook and Christopher Baker criticise the colonial state in their research on markets and inequality in the Madras Presidency. Both scholars argue that markets functioned inequitably because of poorly designed laws and regressive tax structures. Washbrook provides several accounts that demonstrate why government failure explains the limited impact of commercialisation on output growth and poverty reduction in the colonial period.[43] In Washbrook's view, weak property rights and laws that favoured elites over peasants in the nineteenth century cemented a structure whereby rich landowners benefitted from expanding markets while poor peasants remained in poverty. The colonial state protected village elites by granting these groups large estates and empowering them to collect taxes from the poor in the early nineteenth century. Titles to property remained weak in this period, leading to marginal changes in the concentration of landownership within rural elites.[44] This, according to Washbrook, had a lasting effect on the structure of factor markets. Income followed wealth concentration as the rich controlled the supply of money in villages. The poor, competing for limited land and capital resources, crowded the labour market, allowing rich landowners to be monopsonists in their demand for skilled and unskilled workers. The outcome was a 'casualization of labour,' as labour employment was temporary and wages were low. Washbrook takes the argument further to show that the control of factor markets led to the control of commodity markets. Large estates gave landowners storage facilities. Tenant cultivators had no choice but to store and trade commodities through the landowning elite, cementing the transfer of market profits to the rich. The outcome of this structure was supply-constrained money markets, low wages and stagnating output growth. Bruce Robert's study of agriculture in the Bellary district contests the above findings. According to Robert, landownership was becoming less concentrated suggesting that inequities in factor markets were declining in the early twentieth century.[45] Expanding this debate, Baker and Washbrook suggest that the economic conditions of the poor was worse in some

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[43] David A Washbrook, "Country Politics: Madras 1880 to 1930." *Modern Asian Studies* 7, no. 3 (1973): 475-531; Washbrook, "Law, State and Agrarian Society"; David A Washbrook, "The Commercialization of Agriculture in Colonial India: Production, Subsistence and Reproduction in the 'Dry South', C. 1870–1930." *Modern Asian Studies* 28, no. 1 (1994): 129-64; David A Washbrook, "Colonialism, Globalization and the Economy of South-East India, c.1700-1900", *Working Papers of the Global Economic History Network* no. 24/06 (2006).

[44] Amiya Kumar Bagchi, "Land Tax, Property Rights and Peasant Insecurity in Colonial India." *The Journal of Peasant Studies* 20, no. 1 (1992): 1-49.

[45] Bruce Robert, "Economic Change and Agrarian Organization in 'Dry' South India 1890–1940: A Reinterpretation." *Modern Asian Studies* 17, no. 1 (1983): 59-78.

districts than others. Baker argues that sharecropping arrangements in rice producing districts were more landlord favouring than similar arrangements in cash crop and cereal growing regions.[46]

Baker expands on the study of credit markets to include, albeit in not much detail, the impact of weak legal institutions on constraints in credit supply. Baker suggests that the problem was not just the concentration of capital but also inefficient courts as a barrier to entry for commercial banks and indigenous bankers. Indigenous bankers in metropolitan Madras refused to lend to cultivators in the province due to the challenges of enforcing repayment in expensive and time-consuming court cases.[47] However, Baker along with the other historians so far mentioned, were motivated by questions on inequality and the reinforcement of these themes by the colonial regime. Discussions on courts and legal institutions were in the context of whether these exacerbated inequality by not protecting peasants in agrarian India.

The problem of lending risk has not been considered in enough detail. The traditional literature discussed so far concentrates on the borrower's condition and weak bargaining power to explain perpetual indebtedness. There is, however, an observation bias here. Looking at the problem from the lender's accounts, perpetual indebtedness looks like a state of perpetual default. We need to ask, why was the default rate so high that accounts never cleared? A full account of rural credit cannot be complete without a serious examination of the lender's rationale. By considering the lender's position in rural credit, this thesis engages with a revisionist economic history of India, one that applies environmental and institutional theories to understanding the past.

In the book aptly titled, 'A New Economic History of Colonial India', Latika Chaudhary, Bishnupriya Gupta, Tirthankar Roy and Anand Swamy summarise the revisionist view explaining the underdevelopment of rural India during the colonial period.[48] Following general accounts on the economic history of India in the late 1990s and early 2000s, including those provided by B R Tomlinson and Roy, the authors argue that geography, institutions and low public investment are central to the problem of low output growth in agrarian India.[49] Cultivation was rain-dependent due to low public investment in irrigation infrastructure. Climate was volatile with frequent years of drought and failed harvests. Weak property rights and inefficient courts disincentivised investment in improving cultivated land. The rest of the section summarises the recent scholarship

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46 Christopher Baker, "Colonial Rule and the Internal Economy in Twentieth-century Madras." *Modern Asian Studies* 15, no. 3 (1981): 575-602; Baker, *An Indian Rural Economy*.

47 Baker, *An Indian Rural Economy,* 282-283.

48 Latika Chaudhary, Bishnupriya Gupta, Tirthankar Roy, and Anand V. Swamy, *A New Economic History of Colonial* India, (London, 2016).

49 Tomlinson, *The Economy of Modern India*; Roy, *The Economic History of India*.

on these issues and asks: How does the revisionist view explain supply-constraints in rural credit markets?

Tropical climate and the limited infrastructure to store water has motivated an extensive literature on the history of ecology and water politics in India. Sunil Amrith illustrates that water scarcity, and the initiatives taken to access water, has shaped political changes and economic development across Indian history.[50] Though disagreeing on the economic impact of canal construction, Ian Stone and Elizabeth Whitcombe argue that a lack of irrigation infrastructure significantly contributed to poor agricultural performance in colonial India.[51] Roy extends this argument and shows that access to water has not only driven low growth but also regional inequality in colonial and post-colonial India.[52] Cultivation was seasonal in colonial India, following the patterns of rainfall. The well-documented history of agrarian India notes that cultivators sowed and harvested crops according to the timing of the monsoons, centring around four- to six-month bursts of rainfall every year. In an article on the impact of the monsoon on the rural credit, Roy demonstrates that rainfall patterns determined the seasonality of the money market.[53] Borrowers demanded credit before the monsoon and lenders expected repayment at the end. The price of credit, according to Roy, followed this structure of the monsoon.

On institutions and economic development in colonial India, scholars focus on land tenure systems and investment incentives in the agricultural sector. The colonial government implemented a dual structure of land taxes and property rights in India. In some villages, local elites owned all the land and paid a tax on these vast estates to the colonial government. Elites did not cultivate the land and instead leased it out to permanent tenants. In other villages, government owned the land and taxed the cultivator directly. Roy and Swamy show that private investment was restricted in the elite-favouring land tenure systems.[54] Land was not a valuable form of collateral due to the lack of transparency in ownership and titles. The outcome of this, the authors suggest, was restricted supply of mortgage credit. Abhijit Banerjee and Lakshmi Iyer as well as Roy and Swamy show that in villages where the colonial government empowered landowning elites to collect taxes, landowners transmitted their tax obligation to charging higher rents for tenants. Landowners made profits by charging a higher rent than the tax they paid to the colonial

[50] Amrith, *Unruly Waters*.

[51] Whitcombe (1983), *Agrarian Conditions*; Ian Stone, *Canal Irrigation in British India : Perspectives on Technological Change in a Peasant Economy*. (Cambridge, 1984).

[52] Roy, 'Geography or Politics?'; Roy, 'Climate and the Economy'.

[53] Tirthankar Roy, "The Monsoon and the Market for Money in Late-colonial India." *Enterprise & Society* 17, no. 2 (2016): 324-57.

[54] Tirthankar Roy Anand V. Swamy, *Law and the Economy in Colonial India*, (Chicago, 2017).

government. The value of land increased but investments to improve land remained low. Banerjee and Iyer suggest that the dual property rights systems had lasting effects on regional inequality in India.[55]

Roy and Swamy also demonstrate that inefficient courts further limited the supply of mortgage loans. The British-ruled government introduced the system of courts in India, substituting for previous informal forms of village administration. The authors use data on the number of annual pending cases to show that courts became more inefficient towards the latter half of the colonial period. Scholars show that poorly implemented contract laws accentuated the problem of inefficient courts. S Abraham and Marc Galanter argue that the British government designed contract laws that were one-dimensional and did not properly regulate indigenous forms of trade and commerce.[56] The authors suggest that this created confusion in Indian courts as judges were confronted with a conflict between local customs and superficial contract laws. Marina Martin and Sebastian Schwecke show that late nineteenth century contract laws did not capture the diversity in negotiable instruments and bills of exchange used in domestic Indian trade.[57] Schwecke argues that the rural credit market operated outside the regulatory sphere of British-enforced contract laws in nineteenth century United Provinces.

Literature on industrial India similarly documents the impact of weak institutions on capital markets. Scholars show that inefficient courts and weak contract laws discouraged the development of formal banking networks. Family firms, indigenous merchant bankers and social networks determined investment and entrepreneurship in colonial India. Gupta and Gupta et al show that community networks of financiers funded entrepreneurs and Indian industrialization in the late nineteenth century.[58] Thomas Timberg as well as Timberg and C V Aiyar demonstrate that

[55] Banerjee and Iyer 'History, Institutions and Economic Performance'; Lakshmi Iyer, "Direct versus Indirect Colonial Rule in India: Long-Term Consequences." *The Review of Economics and Statistics* 92, no. 4 (2010): 693-713.

[56] Marc Galanter, "The Aborted Restoration of 'Indigenous' Law in India *." *Comparative Studies in Society and History* 14, no. 1 (1972): 53-70. Santhosh Abraham, "Colonial Law in Early British Malabar: Transparent Colonial State and Formality of Practices." *South Asia Research* 31, no. 3 (2011): 249-64.

[57] Marina Martin, "Project Codification: Legal Legacies of the British Raj on the Indian Mercantile Credit Institution Hundi." *Contemporary South Asia* 23, no. 1 (2015): 67-84; Sebastian Schwecke, "A Tangled Jungle of Disorderly Transactions? The Production of a Monetary outside in a North Indian Town." *Modern Asian Studies* 52, no. 4 (2018): 1375-419.

[58] Bishnupriya Gupta, "Discrimination or Social Networks? Industrial Investment in Colonial India." 74, no. 1 (2014): 141-68. Bishnupriya Gupta, Dilip Mookherjee, Kaivan Munshi and Mario Sanclemente. "Community Origins of Industrial Entrepreneurship in Pre-Independence India." *CAGE Working Paper Series*, no. 402 (2019).

family firms in the *Marwari* community controlled trade and industry in the colonial period.[59] Ritu Birla suggests that *Marwari* bankers operated outside the sphere of contract laws and courts.[60]

In the context of lending risk driven by weak institutions and volatile climate, studies by Swamy and co-authors reflect on the impact of targeted state intervention on rural credit markets and output growth in the provinces. Rachel Kranton and Swamy show that the introduction of courts provided some judicial protection for moneylenders but did not protect the welfare of borrowers in mid-nineteenth century Bombay.[61] The authors suggest that lenders became less lenient on defaulting borrowers after the introduction of courts. Two articles by Chaudhary and Swamy reflect on the impact of targeted credit intervention in the Bombay and Punjab provinces. The first analyses the credit market before and after the Deccan Agriculturists Relief Act in 1879, a law that restricted land transfers from rural cultivators to urban moneylenders.[62] The article shows that the restriction on land transfers led to a decline in the supply of mortgage credit but had limited effects on output and growth in the agricultural sector. The second article presents a similar finding in Punjab. Land transfer restrictions, imposed in 1900, had a significant impact on the supply of mortgage credit but a limited impact on economic outcomes.[63]

State intervention in credit cooperatives has been studied in less detail than targeted intervention in private moneylending. The colonial government established credit cooperatives to compete with moneylenders in the credit market. The current scholarship accepts that the cooperative movement failed to compete and displace moneylenders in the provinces. However, the scholarship focuses entirely on the infiltration of political interests in the administration of the cooperative movement. According to Ian Catanach, the cooperative movement in Bombay developed into a complex bureaucratic structure.[64] Rent-seeking administrators ran the structure and benefitted from it through insider-lending. Robert argues that members from local political parties, including the Justice Party and the Indian National Congress, took control of the cooperative movement in colonial Madras.[65] In a similarly political account, Robert suggests that

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[59] Thomas A Timberg and C V Aiyar, "Informal Credit Markets in India." *Economic Development and Cultural Change* 33, no. 1 (1984): 43-59; Thomas A Timberg, *The Marwaris: From Traders to Industrialists*, (Delhi, 1978).

[60] Ritu Birla, *Stages of Capital : Law, Culture, and Market Governance in Late Colonial India*, (Durham, 2009).

[61] Rachel E Kranton and Anand V Swamy, "The Hazards of Piecemeal Reform: British Civil Courts and the Credit Market in Colonial India." *Journal of Development Economics* 58, no. 1 (1999): 1-24.

[62] Latika Chaudhary and Anand V Swamy, "Protecting the Borrower: An Experiment in Colonial India." *Explorations in Economic History* 65, no. C (2017): 36-54.

[63] Latika Chaudhary and Anand V Swamy, "A Policy of Credit Disruption: The Punjab Land Alienation Act of 1900." *Economic History Review* 73, no. 1 (2020): 134-58.

[64] Catanach, *Rural Credit in Western India*.

[65] Bruce Robert, "Agricultural Credit Cooperatives in Madras, 1893-1937: Rural Development and Agrarian Politics in Pre-independence India", *The Indian Economic and Social History Review*, 16 no. 2 (1979): 163-184.

corruption persisted in the administration of cooperatives. Iftekhar Iqbal expands on this argument and suggests that 'social capital, the cornerstone of the cooperative movement was ineffective in Bengal because it had to operate on a ground fiercely contested by political capital.'[66] According to Iqbal, corruption in the administration of cooperatives led to high default rates in Bengal. Nikolay Kamenov provides a descriptive assessment of cooperatives in India. The purpose of this research is to provide different conceptual avenues, in economic, political and social history, that can be applied to understand credit cooperatives in India. The author documents continuities in state intervention in colonial and post-colonial Indian cooperatives. Recognizing the need for further scholarship on credit cooperatives in colonial India, Kamenov observes, 'what seems prima facie striking for a historical issue of such significance is the sparse attention the theme has generated over the last couple of decades.'[67]

In contrast to the limited scholarship in India, there is an extensive literature documenting the success and failures of credit cooperatives in Europe. Scholars study cooperatives in Germany, Netherlands and Ireland, during the nineteenth century, as case studies of divergent results in the diffusion of this banking experiment across Europe. Studies by Timothy Guinnane and various co-authors establish key determinants for the success of cooperatives. Banerjee et al as well as Maitreesh Ghatak and Guinnane provide a theoretical framework of cooperation based on case studies of select regions.[68] The authors demonstrate the importance of high savings, low and localised membership as well as strong external regulation in making the cooperative movement successful in nineteenth century Germany. Sole-authored works by Guinnane demonstrate the benefits of localised membership and strong supervision of primary banks as the drivers of success in Germany but disappointment in Ireland during the late-nineteenth century.[69] Monika Huppi and Gershon Feder focus on the role of high savings. They argue that cooperatives work well when members are jointly liable for loans. Christopher Colvin and Eoin McLaughlin as well as Colvin

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[66] Iftekhar Iqbal, "Cooperative Credit in Colonial Bengal: An Exploration in Development and Decline, 1905–1947." *The Indian Economic and Social History Review* 54, no. 2 (2017): 221-37.

[67] Kamenov, Nikolay. "The Place of the "Cooperative" in the Agrarian History of India, C. 1900–1970." *The Journal of Asian Studies* 79, no. 1 (2020): 103-28.

[68] Abhijit Banerjee, Timothy Besley, and Timothy Guinnane, "Thy Neighbor's Keeper: The Design of a Credit Cooperative with Theory and a Test." *The Quarterly Journal of Economics* 109, no. 2 (1994): 491; Maitreesh Ghatak and Timothy W Guinnane. "The Economics of Lending with Joint Liability: Theory and Practice." *Journal of Development Economics* 60, no. 1 (1999): 195-228.

[69] Timothy W Guinnane, "A Failed Institutional Transplant: Raiffeisen's Credit Cooperatives in Ireland, 1894-1914." *Explorations in Economic History* 31, no. 1 (1994): 38-61; Timothy W Guinnane, "Cooperatives as Information Machines: German Rural Credit Cooperatives, 1883-1914." *The Journal of Economic History* 61, no. 2 (2001): 366-89; Timothy W Guinnane, "A 'Friend and Advisor': External Auditing and Confidence in Germany's Credit Cooperatives, 1889–1914." *Business History Review* 77, no. 2 (2003): 235-64.

adopt a dissimilar though not contradictory approach to this comparative assessment.[70] They highlight the dual role of savings and external supervision as key determinants in the success of banks in Germany and the Netherlands but failure in Ireland. The authors show that religious institutions initiated and managed cooperatives, lowering information costs as membership was low and entirely localised. The literature on Europe looks at default rates, profitability and expansion of the sector as measurement of its success.

The recent historiography of rural credit markets in colonial India engages with an extensive global scholarship on the role of institutions in economic development. Spearheading this approach, Douglas North suggested that property rights, courts and formal procedures are fundamental to long term economic growth.[71] Daron Acemoglu and James Robinson as well as Acemoglu et al apply this theory and argue that countries with these prevailing institutions developed faster than countries with more 'extractive' institutions.[72] Andrea Moro et al extend this argument and show that firms in economies with strong property rights and judicial protection of creditors have greater access to credit than firms in countries without these institutional fundamentals.[73] Studies by Rafael La Porta et al and Simeon Djankov et al analyse the impact of contracts, courts and financial protection on investment.[74] The authors demonstrate that countries with common law systems protected creditors better than countries with uniform civil codes.

However, economic historians have recently debated whether government matters more than 'formal institutions' to facilitate lending, investment and growth. Ha-Joon Chang argues that government intervention matters more for development than property rights and contract enforcement.[75] Pranab Bardhan suggests that the identification of 'good' and 'bad institutions' in New Institutional Economics is too prescriptive.[76] Government, according to Bardhan, can solve

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[70] Christopher L Colvin, and Eoin McLaughlin. "Raiffeisenism Abroad: Why Did German Cooperative Banking Fail in Ireland but Prosper in the Netherlands?" *Economic History Review* 67, no. 2 (2014): 492-516; Christopher L Colvin, "Banking on a Religious Divide: Accounting for the Success of the Netherlands' Raiffeisen Cooperatives in the Crisis of the 1920s." *The Journal of Economic History* 77, no. 3 (2017): 866-919.

[71] Douglass C North, *Institutions, Institutional Change, and Economic Performance*, (Cambridge, 1990).

[72] Daron Acemoglu, Simon Johnson, and James A Robinson. "Chapter 6 Institutions as a Fundamental Cause of Long-Run Growth." In *Handbook of Economic Growth*, 385-472. Vol. 1, 2005; Daron Acemoglu and James A Robinson, *Why Nations Fail : The Origins of Power, Prosperity, and Poverty*, (London, 2012).

[73] Andrea Moro, Daniela Maresch, and Annalisa Ferrando, "Creditor Protection, Judicial Enforcement and Credit Access." *The European Journal of Finance* 24, no. 3 (2018): 250-81.

[74] Rafael La Porta, Florencio Lopez-De-Silanes, Andrei Shleifer, and Robert W. Vishny, "Law and Finance." *Journal of Political Economy* 106, no. 6 (1998): 1113-155; Simeon Djankov, Rafael La Porta, Florencio Lopez-De-Silanes, and Andrei Shleifer. "Courts." *The Quarterly Journal of Economics* 118, no. 2 (2003): 453-517.

[75] Ha-Joon Chang, "Institutions and Economic Development: Theory, Policy and History." *Journal of Institutional Economics* 7, no. 4 (2011): 473-98.

[76] Pranab K Bardhan, "Institutions Matter, but Which Ones?" *Economics of Transition* 13, no. 3 (2005): 499-532.

market coordination problems that institutions might not solve. Identifying the coordination problem and designing the right interventions to address this problem are fundamental to government success in this context.

Economic historians further question the institutional construct in New Institutional Economics. Scholars argue that institutions encompass a range of 'formal' and 'informal' institutional structures. The latter plays an important role in the absence of the former. Avner Greif demonstrates the importance of social networks, trust and reputation in lowering transaction costs and encouraging trade in the eleventh century.[77] Gareth Austin disputes Acemoglu et al's view of property rights and legal institutions and shows that African colonies relied on local customs to facilitate trade.[78] In the context of rural credit markets, Robert Bates suggests that sharecropping and other types of interlinked markets are forms of social contract that facilitate credit exchange in the absence of strong formal institutions.[79] Austin and Kaoru Sugihara suggest that courts were ineffective in the colonies as colonial powers uprooted indigenous networks and forms of administration. These networks facilitated lending in pre-colonial times.[80] The edited volume by Austin and Sugihara contains case studies of credit markets with non-formal forms of contract enforcement in African, Asian and Latin American economies. In the edited volume, Rajeswari Brown and G D Sharma discuss the importance of community networks and indigenous forms of social contracts and enforcement in the Indian credit market. Sharma's research focused on urban merchant traders in seventeenth and eighteenth century Gujarat.[81] Brown documents the financial network of the Chettiar bankers in South India.[82] This literature on community networks and credit demonstrates that informal institutions provided advantages to lenders. They relied on social capital to execute lending strategies that protected against losses from defaults.

Maria Floro and Pan Yotopoulos link the problem of weak institutions and the drive to intervene in informal credit markets. They distinguish between three schools of thought. The

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[77] Avner Greif, "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition." *The American Economic Review* 83, no. 3 (1993): 525-548.

[78] Gareth Austin, "The 'reversal of Fortune' Thesis and the Compression of History: Perspectives from African and Comparative Economic History." *Journal of International Development* 20, no. 8 (2008): 996-1027.

[79] Bates, Robert H., "Social Dilemmas and Rational Individuals: An Assessment of the New Institutionalism", In Harriss, John., Hunter, Janet, and Lewis, Colin M., *The New Institutional Economics and Third World Development*, (London, 1997).

[80] Gareth Austin and Kaoru Sugihara, "Local Suppliers of Credit in the Third World, 1750-1960: Introduction", In Austin, Gareth and Sugihara, Kaoru. *Local Suppliers of Credit in the Third World, 1750-1960*, (London, 1993).

[81] G D Sharma, "Urban Credit and the Market Economy in Western India, c.1750-1850", In Austin, Gareth., and Sugihara, Kaoru. *Local Suppliers of Credit in the Third World, 1750-1960*, (London, 1993).

[82] Rajeswary Brown, "Chettiar Capital and Southeast Asian Credit Networks in the Interwar Period", In Austin, Gareth., and Sugihara, Kaoru. *Local Suppliers of Credit in the Third World, 1750-1960*, (London, 1993).

Traditional Approach suggests that the state can regulate markets to ensure that credit prices are low and investment is high. The Financial Repression Approach argues that state intervention or manipulation of the free market creates unfavourable outcomes for credit markets. In particular, legislation interfering in the market creates obstacles to the supply of credit and hence development in general. The New Institutional Economics approach focuses on reducing transaction costs as a method to reducing the price of credit and increasing investment. Either contract enforcement or social networks where trust among agents lowers transaction costs facilitates higher investment and growth.

In short, the old and new historiographies of rural credit in India as well as the development economics literature provide distinct lessons. The older historiography tells us that poor peasants were persistently indebted to moneylenders. The rich monopolised markets, increased borrowing costs and left peasants with unrepayable credit bills. Much of this scholarship suggests that unequal credit markets accentuated rural inequality in the colonial period, with a mild improvement following pro-borrower interventions in the 1930s. Development economists tell us that these problems persisted into recent times but market structure and exploitation does not capture the full extent of the problems. Weak economic fundamentals, including environmental, institutional and policy regimes added to the risk of lending in rural India. Lenders mitigated this risk with credit terms that did not suit borrowers. The new historiography finds that weak economic fundamentals significantly impacted growth and development in colonial India. Scholars have considered the impact of climate, contracts and policies on rural credit supply. However, there is yet to be a systematic analysis of rural credit in the new historiography. The new historiography is smaller than the older historiography, exploring these problems independently and in select provinces. Expanding these lessons, this dissertation provides a continuous account of lending constraints and ineffectual interventions, and adds new avenues to explore these factors in an under-studied South Indian province.

1.3 Thesis Structure and Contribution

This dissertation asks two interconnected questions: Why were informal credit markets constrained and the cost of capital high; and did credit regulations mitigate or exacerbate these constraints in late colonial and early post-colonial Madras? It answers the question in four substantive chapters. The first two chapters analyse the ecological and institutional barriers to lending money and the ways creditors overcame these barriers in the colonial period. The final two chapters evaluate the design and impact of credit policies. This section justifies the regional and

chronological scope, suggests the major contributions of the project and outlines the structure of the rest of the thesis, highlighting the contributions of each individual chapter.

Why Madras? While facing a similar set of problems as governments in other provinces, officials in Madras experimented with unique intervention. To some extent, the aims of intervention were similar across the provinces. Broadly, officials in British-ruled India subscribed to the exploitation risk narrative. Soaring interest rates and high default rates in the context of stagnating living standards and inequality worried colonial officials and Indian nationalists in the mid-nineteenth century.[83] Both groups believed that unequal creditor-debtor exchange explained high interest rates and perpetual indebtedness as the *modus operandi* for poor peasants. Colonial officials feared peasant uprisings as a result of this inequality. Indeed, colonial officials reported that the exploitation of poor borrowers by rich moneylenders and landowners led to riots in the Bombay Deccan in the 1870s. Adopting a different tone, nationalists argued that elite-favouring policies in the colonial regime meant that peasants were left-behind. Key actors accused the colonial government of either promoting regressive taxation laws or engaging in ineffectual interventions, such as weak lending regulation. The concerns, though motivated by different factors, encouraged the same policy response. Cutting across colonial and nationalist lines, policymakers promoted the protection of borrowers as either a method of preventing riots in the countryside or as a solution to inequality.

Despite these general similarities, research on credit intervention in India is best conducted as provincial case studies. The nature of the credit market differed in each province. Indigenous bankers and traders from the cities provided credit to the cultivators in most provinces. *Marwari* and *Bania* traders, for example, provided the majority of rural credit in Bombay, Punjab and Sind provinces. The market operated with a different structure in Madras. In this province, cultivators themselves provided the majority of rural credit. The difference in credit supplier motivated a unique set of interventions in Madras, relative to the other provinces. Laws, following the transition from Company to Crown Rule in 1857, determined the legislative capacity of federal and provincial Indian governments. Provincial governments were responsible for regulating rural credit markets. As such, the provinces executed different policy responses, at different times, from the late-nineteenth century. The Bombay Deccan was the first to regulate rural credit markets in 1879. The government in Punjab followed suit in 1900. Both governments regulated land transfers as a method of tackling exploitation. Credit regulation in Madras came much later. The government in Madras regulated private moneylenders in the 1930s. Officials in Madras regulated

[83] Kranton and Swamy, "The Hazards of Piecemeal Reform", provide a discussion of the policy motivations of colonial and nationalist administrators in the nineteenth century. The authors show that this culminated in intervention in the credit market from the 1870s.

credit through interest rate ceilings. While scholars have recently studied the impact of targeted intervention in Bombay and Punjab in the late-nineteenth century, the Madras presidency presents a new case study of a different set of credit policies.

The thesis identifies two policy approaches that were specific to Madras. First, provincial officials enforced a price ceiling on loans from moneylenders in 1937. Moneylenders were legally bound to charge borrowers a fixed rate of interest that was significantly lower than the market average. Second, the colonial government introduced cooperative banking to the agricultural sector, to compete with local moneylenders, from the early-twentieth century. The strategy to nurture greater market competition by establishing credit cooperatives was a common feature across the provinces. However, provincial governments erected the institutional structure around the cooperative movement. Indeed, local officials were responsible for the regulation and management of the cooperative sector. The government introduced the first state-regulated cooperative in the Madras Presidency in 1904. The number of rural cooperatives saw a steady increase in the 1920s with particularly large state-financed capital injections into the sector in the 1940s and 1950s. Analysing these specific policies justifies the regional scope of this study, while also demonstrating its contribution to our understanding of credit markets in the Indian provinces.

The chronological scope of the dissertation requires justification. The timing of legislation and the availability of sources justifies the starting point of 1930. The Great Depression and the credit intervention that followed motivated colonial and post-colonial provincial governments to survey rural credit markets at the village level in the 1930s. As the next section will show, the government continued this trend of credit reporting in the 1940s and 1950s. Despite the source availability, rural credit in the middle decades of the twentieth century is under-researched. Current scholarship has focused on the colonial period before 1940 and the Green Revolution period after 1960. The analysis in subsequent chapters fills missing gaps in our knowledge of credit in the 1940s and 1950s.

Extending the analysis beyond 1947 requires a more thorough explanation. The end of colonial rule marks a political turning point but had a small effect on rural credit. When serious discussion on rural development began in early-twentieth century India, economists and political administrators shared an agreement that the solution to peasant poverty, and stagnant agricultural productivity could be found in interventions in property rights and credit markets, usually a joint intervention in both spheres. The agreement cut across the colonial and nationalist dividing line, and therefore, the interventions that followed spanned both colonial times and early post-independence decades. Indeed, the policies enforced in the late 1930s lasted after the end of

colonialism, inspiring this study to extend its analysis beyond changes in spatial and political regimes in the middle of the period.

If credit policies continued into the latter decades of the twentieth century, then why end the analysis in 1960? The thesis stops at 1960 to account for the start of the Green Revolution. As is well documented, the colonial and early post-colonial period until 1960 was one of economic stagnation in rural Madras. Growth rates were low, innovation was limited and, as subsequent chapters will suggest, institutional arrangements did not change much. This offers a unique setting to study the rural credit market. Unaffected by changes in economic fundamentals, the thesis can isolate the impact of policy decisions on the supply of rural credit. The Green Revolution changed the economic landscape of rural South India. After 1960, agriculture saw technological innovation and the credit market became more diversified as public banks and micro-lending organisations began lending in the countryside. A thorough account of the impact of intervention on rural credit markets in this changing landscape would mean introducing a much larger set of assumptions and explanations. As such, this dissertation considers 1960 a year marking structural change in the Indian rural economy and therefore outside the scope of this project.[84]

In studying the context, design and impact of specific interventions, lessons from the dissertation intersect policy and economic history. The thesis demonstrates that the results from the intervention in Madras were disappointing. Artificial price ceilings led to efficiency losses and had an insignificant impact on equity.[85] Following intervention, credit supply contracted and lenders evaded the law. The strategy to increase competition also failed as cooperatives functioned unprofitably and captured a minimal share of the rural credit market.

An argument can be made that in subscribing to the exploitation risk narrative, the state ignored the other factors that contributed to problems in rural credit. The frequency of crop failure and high enforcement costs explained the cost of borrowing and high default rates, challenging the original motivations and design of the government's strategy. Low public investment in irrigation meant that cultivation was dependent on unpredictable rainfall patterns. Chances of crop failure were high resulting in dual risks for borrowers and creditors. Poor borrowers that relied on seasonal income ran the risk of defaulting on loans. Lenders ran the risk of providing

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[84] Although the institutional setup and market structure changed, the problem of defaults did not disappear. Since crises in microfinance organisations and public banks recurred in recent times, this thesis may have an enduring message. However, because of the institutional changes, including the post-Green Revolution era in this thesis would make the narrative much more complicated to handle.

[85] Welfare economics has long contended with Okun's Law or the trade-off between efficiency and equity. The Law explains the inverse relationship between income growth and equality. Arthur M Okun, *Equality and Efficiency, the Big Tradeoff*, (Washington, 1975), shows that the 'leaky bucket' of redistribution diminishes the efficiency of resource allocation in a given economy. In the context of intervention in rural credit markets, the thesis shows that the price ceiling led to a contraction in supply, despite sustained demand, and a black market for loans at pre-ceiling prices.

unrecoverable loans. Creditors cum cultivators lending profits made in one year risked losing this additional income in the following year, returning to more modest means than before. In addition, the costs of enforcing repayments were high. High default rates meant that creditors relied on contracts and courts to recover loans. However, contract laws were poorly designed while courts offered a lengthy and expensive method of enforcement.[86] Creditors accounted for these costs in the price of unregulated credit. Unable to account for enforcement costs following intervention, lenders either exited the market or evaded the law.

This thesis finds that a political ideology prioritising equity over efficiency inspired the design of credit intervention in the colonial and post-colonial period. Governments acted on a belief that investment remained low and peasants remained poor because of market failure. However, this belief and the policies it motivated led to unsuccessful results. The desire to protect poor peasants, through artificial price ceilings and the introduction of poorly regulated market competitors, from market fluctuations constrained money markets further and forced peasants to access high-priced credit in unregulated black markets. Indeed, the thesis highlights the glaring juxtaposition in the government's recognition of the need to increase private investment and its belief that reduction in credit supply was a measure of economic prosperity. This lesson has some implications for the impact of credit policies in the decades after 1960. Governments in modern India continued to act on a belief that borrower protection shielded poor peasants from exploitative markets. Whether this persistence in ideology was driven by a deliberate diversion away from financially demanding public investment policies that could improve productive efficiency in agriculture or a result of path dependency and a resistance to ideological and political change remains to be fully understood.

The thesis is divided into four substantive chapters. The first chapter links environmental factors to regional variation in cropping patterns and money markets. The chapter shows that creditors responded to climate risks in regionally-distinctive ways. Dry regions were prone to droughts and wet regions, though much better-off, were prone to waterlogging. Frequent crop failures meant default rates were high and liquidity was constrained. This problem was more severe in the dry districts. Creditors mitigated this risk by excluding poor borrowers from accessing credit in the dry districts, whereas borrowers across income categories accessed credit in the wet districts. Fragmented markets accentuated this problem as money rarely travelled from villages in one rural district to villages in another. To show this regional variation, the chapter constructs and analyses

[86] Inefficient legal institutions further challenged effective implementation of credit laws. The government relied on court judges to enforce credit laws. The thesis shows that the institutional legal structure did not properly execute policies implemented by the provincial government.

two novel data sets. The first examines the provision of loans in select villages illustrating differences in the amount of credit provided, purpose of borrowing and default rates. The second observes sixty-year climate and cropping patterns in 208 municipalities. The chapter presents the data in tables and maps to clearly demarcate regional patterns.

The chapter contributes to scholarship on environmental economic history. Expanding existing scholarship on the climate and credit in colonial India, the chapter demonstrates that credit markets in dry villages responded differently to environmental factors than markets in wet villages. This was particularly significant in Madras where cultivators were also moneylenders. Liquidity in the credit market was strongly linked to the profitability of cultivation. The chapter also has implications for weather shocks, growth and regional inequality. Using new data and material from sources that have not been used in this context, the chapter suggests credit access as a previously unexplored avenue connecting environmental factors to regional inequality in colonial South India.

The second chapter demonstrates the ways in which creditors compensated for the costs of contract enforcement in rural Madras. Economic theory tells us that moneylenders priced enforcement costs in interest rates. This study of credit enforcement in colonial Madras corroborates this theory but suggests that creditors transmitted enforcement costs to contracts and credit pricing in regionally-distinctive ways. The chapter considers two types of credit contracts used in Madras and provides an analysis of the costs of enforcing each. Creditors used contracts when the size of loans outweighed the costs of enforcement. The chapter finds that this incentivised lenders to operate a multi-tiered loan structure. Creditors initially provided unsecured loans and attached contracts to loan extensions. When contracts were used, creditors increased the price of loans to compensate for the costs of enforcing them. This further highlights differences in credit access between districts. Creditors in the wet districts were more willing to underwrite loan extensions with contracts than lenders providing small loans to poor peasants in the dry districts. When enforcement costs outweighed the size of loans, credit terms were harsh and extensions less likely.

This chapter contributes to regional and institutional economic history. Contracts and other negotiable instruments were important features of the unregulated credit market in Madras. By looking at the relative costs of enforcing different types of credit contracts, this chapter fills important gaps in our understanding of the role of courts and judicial proceedings in the Indian rural economy. Extending regional comparisons, the chapter also suggests that creditors typically used financial instruments for loans to richer borrowers. Lending to the poor especially in the dry districts, until multiple defaults compounded the value of these loans, remained unsecured and operated outside the sphere of formal procedure.

The third chapter studies credit intervention in the context of environmental and institutional constraints to the money market. It demonstrates that the government intervention of an artificial interest rate ceiling led to a contraction in credit supply whilst allowing lenders to operate in a 'black market' where creditors provided loans at illegal rates of interest. The high cost of enforcement was a key driver of this policy failure. When the state-imposed ceiling was introduced, creditors avoided the high costs of formal courts and resorted to informal enforcement through interlinked crop sharing contracts instead.

The chapter makes contributions to the history of credit intervention and enforcement mechanisms in rural India. The chapter is the first study to demonstrate the impact of 1930s intervention on rural credit supply in Madras. In doing so, the chapter highlights areas that other provincial studies have not considered. The accent on enforcement is one particular area. Enforcement mechanisms have been studied in isolated spheres of courts and banking or informal arrangements and financial intermediaries. The chapter demonstrates that the study of moneylenders, as the only bankers in many villages, requires a framework that can interconnect the two institutional structures, formal and informal. Moneylenders contended with a trade-off between courts and informal enforcement where outcomes depended on the transaction costs of each. Intervention increased the enforcement costs of some arrangements but not others resulting in a transition, rather than complete decline, in the supply of credit.

The fourth chapter analyses the performance of cooperative banking in rural Madras. The colonial government aimed to design a cooperative model that mirrored the successful Raiffeisen banks in Western Europe. The chapter shows that the transplanted cooperative banking model did not perform well in India. The cooperative sector grew exponentially in the early to mid-twentieth century. However, cooperatives failed to displace the village moneylender. Managers of cooperatives selectively allocated loans and despite the selective allocation of loans, the cooperative sector was unprofitable. The chapter demonstrates that administrators in late-colonial and early post-colonial India designed a cooperative model that differed from the European model in important ways. Prevailing political objectives prioritising equity over efficiency led to a cooperative structure operating with low savings and weak regulation. The regulatory problem ultimately led to exclusion of poorer peasants from accessing credit and over-leveraged cooperative banks. Post-colonial Indian governments injected public money into the cooperative sector in the belief that this would increase credit access for poor borrowers. However, flaws in regulatory design persisted, allowing managers to falsify accounts, embezzle and insider-lend.

The chapter contributes to a regionally under-researched topic. As discussed in the previous section, the existing literature provides a discussion on socio-political barriers to cooperation.

Instead, the chapter considers the design of the transplanted cooperative banking model as an explanation for its non-performance. In doing so, the chapter adds a region of comparison to the global business and economic history of credit cooperatives. The existing scholarship is largely Eurocentric, despite the emergence, and rapid rise in the number, of cooperative banks in British colonies in the early twentieth century.[87] Analysing the performance of cooperatives in India offers a benchmark for further contributions on similar transplants in other colonial contexts.

1.4 Sources and Methodology

The dissertation relies on three groups of sources: government reports, laws and court records as well as contemporary studies including journal and newspaper articles, books and doctoral dissertations. It uses descriptive and data visualization techniques as well as narrative methods and case studies to analyse this source material. This section describes the source material and method adopted to analyse data and text.

On agriculture and cropping patterns, the first substantive chapter of the thesis uses data and qualitative material from three key reports. First, the provincial government in Madras published a series of *District Gazettes* to survey socio-economic conditions across villages in select districts in 1915. The thesis uses the Gazettes from Bellary, Cuddapah, Godavari and Tanjore districts to reflect on the different economic conditions in each region. The thesis uses qualitative information from the reports to analyse environmental conditions, cropping patterns and types of tenancy contracts in each district.

Second, for micro-level data on agriculture and land use, the thesis relies on the *Statistical Atlas of the Madras Presidency*. The government compiled three reports using agricultural data from 1920, 1930 and 1940. The thesis uses the data from 1930. The 1936 *Statistical Atlas of the Madras Presidency* provides a range of data at the *taluk* or municipality level including: cultivated acres, land tenure by acres, cropping patterns by acres, average 60-year rainfall patterns in inches, cattle and ploughs used per acre as well as amount of irrigated land in 240 municipalities.[88] Using this data, the thesis

[87] For example, there is little research on the history of cooperatives in British-ruled African colonies. For discussions on the politics of cooperatives in mid-twentieth century South Africa and Zambia see, Paul B Rich "Bernard Huss and the Experiment in African Cooperatives in South Africa, 1926-1948." *The International Journal of African Historical Studies* 26, no. 2 (1993): 297-317; Andrew Bowman. "Mass Production or Production by the Masses? Tractors, Cooperatives, and the Politics of Rural Development in Post-independence Zambia." *The Journal of African History* 52, no. 2 (2011): 201-21. For the cooperative movement in Nigeria, see Samuel Oladele Adeyeye, *The Co-operative Movement in Nigeria Yesterday, Today and Tomorrow*. (Göttingen, 1978).

[88] The rainfall patterns are averages taken over a 60-year period in each meteorological station. By 1930, most municipalities had a meteorological station. If not, the thesis uses the meteorological station nearest to the municipality.

exploits Geographic Information System (GIS) software to show spatial variations in agriculture across the Madras province. The maps show differences, by municipality, in cropping type and rainfall. Mapping the data was challenging as there is currently no resource containing geospatial vector data showing provincial boundaries of colonial Madras. The thesis uses modern-day vector data and adjusts the boundaries to reflect those in colonial times. However, using modern vector data meant that the prototype map did not include municipality names and boundaries from the colonial period. Matching the data to the right municipality added an additional challenge. To overcome this, the author manually indexed the colonial municipalities and matched these to modern day municipalities.[89] To account for possible border differences, the maps do not take whole municipalities as the unit of analysis but instead match data to the centre of the municipality, making the assumption that town centres have not changed much since independence. In adopting this method, the index could not match 24 municipalities and reported eight errors where municipalities matched outside the colonial borders. After indicating the errors, maps in the first chapter show agricultural patterns in 208 municipalities.

Third, the chapter uses material from the *Techno-economic Survey of Madras*. The Department of Industries, Labour and Cooperation in the provincial government published the report in 1961. The section on agriculture contains key information on soil quality and yields as well as irrigation projects from the late colonial period and their estimated impact on output. The chapter supplements this with material on cropping seasons as well as labour and tenancy contracts in districts from the 1938 *Report of the Madras Famine Code Revision Committee*, the 1951 *Census of India Volume III: Madras and Coorg*, the 1951 *Agricultural Statistics of India* and 1956 *Indian Crop Calendar*.

Government reports and surveys provide the majority of rural credit data analysed in the thesis. After the 1875 Deccan Riots, the colonial government regularly commissioned reports to record the level of development in villages, municipalities and districts. The reports focused on land and rural credit markets. The federal government did not commission these reports. Provincial governments regularly documented rural credit markets. Regulating rural credit was a provincial rather than federal concern, motivating this method of documentation. The government's purpose in writing these reports was two-fold. First, and most informative for the thesis, the government used these reports to understand regional differences in the structure of rural credit. The reports, surveying select villages and districts, reported on: the number of moneylenders, the type of moneylender, the types of lending arrangements including mortgages and some features of the borrowers including the purpose of borrowing. Reports also recorded key features of the

[89] The *Indian Administrative Atlas,* published in 2001, provides boundary changes at the municipality level from 1947 to the present day.

cooperative banking sector including lending, repayment rates, savings, share capital and external borrowing. Second, the government used the reports to calculate market size of rural credit. In this context, the government believed that smaller market size meant more prosperity. The government measured the presence and persistence of usury by the volume of lending. In their view, peasants that borrowed were poor and exploited in the credit market. Peasants that did not borrow had disposable income and were, therefore, better off than borrowers. The government did not see moneylenders as a source of investment but as rich agents exploiting poor peasants.

The thesis analyses two categories of government reports: annual reports and isolated reports. In the annual category, the thesis relies on three key reports compiled by departments in the provincial government in Madras. First, the Justice Department compiled the *Madras Civil Justice Report* annually. The report contains key data on the number of civil disputes, the number of disputes involving credit and the average time taken for money disputes to reach conclusion. The government reported these figures annually throughout the period, with the exception of the period between 1940 and 1945. The thesis plots this data on bar, line and scatter graphs to show temporal variation in the scope and productivity of civil courts. Second, the Registration Department compiled the *Report on the Administration of the Registration Department in the Madras Presidency*. The reports, recorded annually, provided all new land registrations in each district from the 1870s to the end of the colonial period, with the exception of the period between 1942 and 1946. The reports recorded land transfers by instrument, differentiating between gifts, mortgages and sales. Individual district borders changed and bifurcated during this period resulting in non-uniformity in the number of districts recorded. The thesis plots line graphs to show temporal changes in mortgage lending while using Michelle McAlpin's commodity price index to calculate *real* values of loans during the period.[90] Third, the Cooperative Department in the provincial government constructed the *Annual Report on the Working of the Co-operative Credit Societies Act*, recorded key annual data of the cooperative banking sector. The reports include the number of members as well as volume of saving, external borrowing, share capital and lending. Using this data, the thesis plots annual net profit statements on line graphs and data indices demonstrating annual growth rates in key measures for the cooperative banking sector. The thesis accesses the reports from 1928 to 1940. The reports also contain qualitative information on cooperative banks including results from audits, performance of apex banks and changes to cooperative laws.

In the isolated category, the thesis relies on eight government surveys of rural credit. The provincial government commissioned committees of civil servants to survey land and credit

[90] Michelle McAlpin, "Price Movements and Fluctuations in Economic Activity (1860–1947)." Chapter. In *The Cambridge Economic History of India*, edited by Dharma Kumar and Meghnad Desai, 2: 878–904, (Cambridge, 1983).

markets in villages across the province. The civil servants were members of the Legislative Council in the Madras government.[91] The reports on Madras were scarce in the nineteenth century but increased in the late colonial period for two reasons. First, the government did not believe rural credit posed a development problem in nineteenth century Madras. Provincial policymakers in Bombay and Punjab were concerned that land was transferring from rural cultivators to non-cultivating urban moneylenders at a fast rate. These policymakers commissioned reports to inform interventions in credit and land transfer in the late nineteenth century. In Madras, serious discussions about credit intervention did not properly begin until the Great Depression. Indeed, the Great Depression had a significant impact on credit defaults, and therefore investment, growth and poverty. The number of official publications, specifically on rural credit in Madras, increased in the 1930s. This informed interventions in the late 1930s while some reports in the mid-1940s documented the impact of the intervention. Second, the number of Indian policymakers in government increased from 1909. After the establishment of diarchic rule in 1919, regulating rural credit was a provincial, and thus local legislator's, responsibility rather than federal. Local government took a keen interest in documenting features of rural credit to inform policy decisions.

The first provincial report to survey, quantitatively and qualitatively, rural credit in the villages was the *Madras Provincial Banking Enquiry Committee Report*, published in 1930. The federal government set up different Provincial Banking Enquiry Committees across provinces and published a series of reports on each province in 1930.[92] The Madras report and evidences contain six substantial volumes. The Banking Enquiry Committee hired a team of investigators to survey credit in 80 villages in the late 1920s. The report contains data on types of lenders, volume of lending, credit instruments used and purpose of borrowing in each village. The report also published a range of interest rates by district and model legal costs for rural credit disputes. This data is in the first volume of the report, while the additional volumes contain interviews with cultivators and longer descriptive reports from the investigators. The first and second chapters of this thesis use data and qualitative material in the first volume to demonstrate features of rural credit prior to the Great Depression and before intervention. The data is plotted on graphs to show regional variation in moneylending and the impact of legal costs on the price of credit. The

[91] The Legislative Council framed laws until 1937 where the government formed the first elected Legislative Assembly. From 1937, the leader of the Legislative Assembly appointed a small group of members to the Legislative Council, forming a governance structure similar to parliament and cabinet.

[92] H M Hood chaired the Madras Banking Enquiry Committee. Hood spent the early 1920s as Collector (a term for tax collector during Company rule but evolved to mean Administrator of a district during Crown rule) of the Nellore district. Hood became part of the Legislative Council in the late 1920s and formed a team of policymakers to report on banking in the province. The 1930 report cost 59,000 rupees to compile.

thesis uses interviews from the second and third volumes to supplement the findings from the data.

The onset of the Depression in the early 1930s motivated the provincial government to commission a report on the impact of the price crash on rural credit and, more specifically, whether the crisis increased borrower exploitation. The *Report on Agricultural Indebtedness,* published in 1935, expands on the data provided in the Provincial Banking Enquiry Report.[93] The report, through a larger number of investigators, surveyed 141 villages showing data on types of moneylender, credit instruments used and purpose of borrowing. The report also contains data on the number of legal disputes in civil courts and the credit instruments under question in those disputes. The thesis plots this data in graphs, compares it to data from 1930 and shows regional variation. It also analyses the material on auditing procedures in cooperative banks. The report suggests that the Depression had a limited impact on reducing indebtedness and therefore argued that exploitation persisted.

On the impact of land laws on rural credit, the thesis analyses select surveys and interviews in the 1938 *Report of the Madras Estates Land Act Committee: Part 1*. Nine members from the Legislative Assembly formed the committee and conducted an investigation into problems in one land tenure system in Madras. Four members belonged to the Legislative Council, including the Chairman of the committee, T Prakasam who was Minister of Revenue for the province at the time.[94] The committee reported that the strengthening of tenancy laws, enforced by the colonial government, in the early twentieth century did not go far enough to strengthen the rights of permanent tenants.

The provincial government commissioned a survey of rural credit markets in 1946, to evaluate the impact of intervention in the late 1930s. B V Narayanaswamy Naidu, an economist and member of the Madras Legislative Assembly, compiled the report.[95] The purpose of the report was to estimate if credit laws in the late 1930s resulted in lower levels of indebtedness across the province. In estimating this, the report surveyed borrowers in 8350 households in isolated years of 1939 and 1945. The report does not provide data at the household-level but places groups of households in 10 regional zones. Data is aggregated and presented at the zone-level. The thesis

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[93] W R S Sathyanathan, was a member of the Indian Civil Service. The provincial legislature appointed Sathyanathan as a 'Special Officer' to report on rural credit in 1935.

[94] Tanguturi Prakasam was a barrister in rural Madras until joining the Indian National Congress party in the early 1920s. Prakasam became an influential political figure in the province in the late colonial period, holding ministerial positions in the Legislative Assembly in the late 1930s and early 1940s. In the post-colonial period, Prakasam rose to leader of the Madras legislature until advocating for the partition of the province, following which he was elected as the leader of the Hyderabad legislature.

[95] B V Narayanaswamy Naidu was a barrister and economist. Following his call to the Bar in 1929, Naidu was appointed Professor of Economics at Annamalai University in 1930. In 1939, the university promoted Naidu to Vice Chancellor. In the 1937 election, Naidu joined Thomas as member of the Madras Legislative Assembly.

calculates the *real* value of loans borrowed in each zone and plots this data on bar and line graphs to show temporal variation in the volume of lending.

For rural credit in the 1950s, the thesis uses data from the *All India Rural Credit Survey*. Commissioned by the Reserve Bank of India in 1951, the report surveyed villages across rural India between 1951 and 1954. The report consists of three volumes. The first volume is divided into two parts: *Rural Families* and *Credit Agencies*. The second part, published in 1957, contains data on types of moneylender, volume of loans secured by different credit instruments and interest rates. The report collects this data by interviewing lenders and borrowers in the villages. The thesis compares this data with data from the previous decades to show continuities and discontinuities in the credit market. The second volume, titled *The General Report*, contains recommendations for policy interventions in rural credit. The report provides case studies of select villages, including a village in the Tanjore district in Madras, and recommendations on improving the cooperative banking structure to lower the price of credit for poor peasants. The village study informs analysis on sharecropping contracts in the third chapter of the thesis and the material on cooperatives adds to the analysis on auditing problems in the fourth chapter.

On cooperatives, the thesis uses material from three other isolated reports. The first is the 1895 *Report on the Possibility of Introducing Land and Agricultural Banks in India*. The government commissioned the report to analyse whether transplanting the cooperative model in rural India would diminish usury and increase investment in the countryside. The report, compiled by Frederick Nicholson conducts case studies of successful cooperative banking experiments in Europe.[96] Nicholson concludes that the Raiffeisen model would work in India as long as the government transplanted the model with the same features as its successful counterpart in Europe. The thesis analyses the report to determine the differences in the features of the Indian cooperative model and those of the European Raiffeisen model. The second and third are the 1928 and 1956 *Report of the Committee on Co-operation in Madras*. C A H Townsend chaired the committee that compiled the 1928 report.[97] The report describes changes to laws pertaining to cooperative banks from its inception and demonstrates key features of management in cooperative banks. T M

[96] Frederick Augustus Nicholson, educated in the Royal Medical College and Lincoln College, Oxford, joined the Indian Civil Service in 1869. He was stationed in Madras throughout his career and was promoted from the lower ranks of district administrator to member of the Legislative Council in 1897. Nicholson is credited for his reports on rural development including works on famine and banking. Colonial and post-colonial administrators refer to Nicholson as the 'father of the cooperative movement in India.'

[97] C A H Townsend was an Indian Civil Servant who spend most his career in Punjab. Townsend was Director of Agriculture in early 1920s Punjab. In 1927, on the request of the provincial government in Madras, Townsend travelled to conduct a report on the progress of the cooperative movement in the southern province.

Narayanaswamy Pillai chaired the committee that compiled the 1956 report.[98] The report contains annual data on savings, membership, external borrowing, lending and repayment rates from 1940 to 1955. The thesis combines this data with data from the *Annual Report of the Working of the Co-operative Societies Act* (see above) to construct an annual data set on key features of credit cooperatives from 1928 to 1955. The thesis analyses the data by plotting line graphs and data indices showing annual changes in the performance of cooperative banks. The 1956 report also contains useful information on changes in the capital and regulatory structure of the cooperative movement. This forms an important source for the analysis, on the role of the state in cooperatives in the 1940s and 1950s, in the fourth chapter of this dissertation.

Officials in the executive both commissioned and compiled government reports, suggesting areas of potential source bias. Private moneylenders and borrowers rarely maintained account books and when they did, they were not compelled to share these with the government. The government designed its own method of collecting data on the rural credit market. The committees appointed to draft the reports provided questionnaires to teams of surveyors. Surveyors used these questionnaires to collect information from residents in villages. This method could result in two forms of prejudice. First, in the questionnaire drafting stage, government committees could have designed questionnaires to yield biased results. For example, it would suit the government if the public believed that credit was expensive because moneylenders were extractive rather than because of policy failures. Second, in the results gathering stage, moneylenders and borrowers could have fabricated responses to the surveyors. For example, lenders could understate and borrowers could exaggerate interest rates.

However, these areas of bias should not affect the analysis in the thesis for three reasons. First, the government asked a different set of questions in its surveys to the questions asked in this thesis. The government was more concerned with the volume of credit rather than the nature of credit. It asked questions on the size of borrowing rather than structure of the market in the rural villages. The reports only indirectly provided the data analysed in this thesis, limiting scope for prejudice. Second, the reports often yielded results that contradicted the government's position. The government commissioned the reports on credit to make informed policy decisions. The reports themselves offered policy recommendations. Nevertheless, officials in government often disagreed with the findings in the reports. This disagreement occurred due to contradictory interests among different administrative departments. For example, the Cooperatives Department and the Board

[98] The report also records material from a previous report in 1940 compiled by a committee led by T Vijararaghavachariar. Narayanaswamy Pillai was a member of the Indian National Congress and the Madras Legislative Assembly until losing his constituency in 1952. Following the loss, Pillai was appointed as the Vice-Chancellor of the Annamalai University.

of Revenue disagreed with the findings and policy recommendations in the 1935 *Report on Agricultural Indebtedness*. The legislature agreed with the views of these departments and 'dismissed' the report's recommendations.[99] In other words, the interests of the executive did not always conflict with the interests of the reporters. Third, the thesis uses material from court records and contemporary studies to supplement the data from government reports. For the most part, evidence in the different groups of sources show similar patterns. The thesis presents and explains areas of conflicting evidence.

On legal sources, the thesis analyses material from the laws themselves to evaluate the design of government intervention. The third and fourth chapters examine nineteenth century contract laws and their relationship to rural credit in the twentieth century. The chapters focus on the *1872 India Contract Act* and the *1881 Negotiable Instruments Act*. The *1908 Madras Estates Land Act* and *1948 Madras Estates (Abolition and Conversion into Ryotwari) Act* provides descriptive detail on changes to laws surrounding property rights and its expected impact on the supply of mortgage credit. Laws in the mid-1930s, including the *1935 Madras Debtors Protection Act, 1936 Madras Debt Conciliation Act* and the *1938 Madras Agriculturists Relief Act* focus on direct intervention in the credit market. The fourth chapter analyses the design of these credit interventions in the 1930s. Cooperatives were a state-driven initiative in India. Studying laws on cooperatives, therefore, is fundamental to analysing the performance of this banking structure. The *1904 Cooperative Societies Act* and *1912 Cooperative Societies Act* stated the necessary conditions for group lending arrangements to legally register as credit cooperatives. Both Acts also define the capital structure of the cooperative movement. In 1919, the federal government delegated policymaking on cooperatives to individual governments in the provinces. The *1932 Madras Cooperative Societies Act* defined the management and regulatory structure of credit cooperatives.

The government relied on courts to enforce laws. Case records are a key source of information on the impact of laws on the moneylending. Case files containing counsels' pleadings are inaccessible to the public. The case records that are accessible contain summaries of pleadings and the entire final judgement. The thesis analyses case judgements from the Madras High Court.[100] The second and third chapters examine select case judgements in the late 1930s and early 1940s. The cases involved moneylenders challenging credit intervention by citing the sanctity of contract promoted in nineteenth century contract laws. The chapters use court disputes to explore legal conflicts between contract laws protecting free enterprise and credit intervention restricting the

[99] Manikumar, *A Colonial Economy,* 148-149.

[100] There is no accessible resource for case judgements from lower courts. The thesis finds some judgements from district courts in contemporary accounts.

contractual obligations of borrowers. The fourth chapter analyses case judgements involving failing cooperative banks. The government liquidated unprofitable cooperative banks. Cooperatives challenged their liquidation in courts. The chapter analyses these judgements, exploring the impact of mismanagement on failing cooperatives.

Finally, the thesis supplements government reports and court records with material from contemporary studies. The thesis uses articles books written by economists and policymakers to further investigate differences, within the colonial and post-colonial provincial administration, in the state's approach to rural credit. Many of these key actors compiled the government commissioned surveys on rural credit in the 1930s and 1940s.

The thesis uses data and qualitative material from five economists cum legislators: C F Strickland, P J Thomas, B V Narayanaswamy Naidu, K G Sivaswamy and M L Dantwala. Strickland wrote articles on rural credit markets and cooperatives in 1929 and 1932 while producing a pamphlet in 1939, outlining expected results from credit intervention in the late 1930s. Thomas, a member of the Indian National Congress and the Madras Legislative Council in the 1930s, published a book titled *The Problem of Rural Indebtedness* in 1934.[101] The book, mostly qualitative, echoes the results from government surveys and discusses the importance of reducing the volume of debt in rural India. Naidu was Thomas' compatriot in the Madras Legislative Council. Naidu wrote on the impact of intervention on credit supply and the evolution of the cooperative movement in the 1920s and 1930s. The third and fourth chapter of the thesis uses the data from both accounts. K G Sivaswamy published on the impact of the Madras Agriculturists Relief Act, immediately post the intervention in 1939.[102] The publication contained descriptive evaluations of tenancy laws and credit markets across colonial India. Dantwala, an economist in the University of Mumbai, held important positions in the Indian National Congress until the 1970s.[103] The thesis analyses data from one of Dantwala's articles titled, 'Agricultural Credit in

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[101] P J Thomas was a lecturer in the Economics Department at the University of Madras between 1927 and 1942. Thomas was elected as a member of the Madras Legislative Assembly in 1937 and contributed to governance in the province till 1942. At this point, Thomas began a 20-year career as an advisor to the Indian government in Delhi. Thomas published extensively on all areas of the Indian economy.

[102] K G Sivaswamy was among the less familiar historical figures that shaped the evolution of the Indian independence movement. He was an active member of both the Servants of India Society as well as the Agricultural Workers Union prior to independence. Sivaswamy's ideological leanings eventually inspired his membership of the Madras Socialist Party in the early 1950s where he advocated for the benefits of collective farming in India. Sivaswamy encouraged a practical approach to regulating informal lending in rural India. He criticised the 1879 Deccan Agriculturists Relief Act, which restricted the transfer of land from borrower to moneylender in agricultural Bombay, for causing an immediate contraction in the supply of credit for smallholder cultivators.

[103] M L Dantwala was a well-published economist and political activist. Politically, Dantwala was a fervent supporter of Gandhi and joined other activists in the movement for Indian independence. Academically, Dantwala, while incarcerated in a jail in Bombay for his political activism, completed a doctorate in economics from Wilson College in 1937. He published on agriculture in the 1940s and 1950s. Dantwala was known as 'the founding father of modern

India: The Missing Link', published in *Pacific Affairs* in 1952. The article presents two arguments. First, moneylenders successfully evaded intervention in the 1940s. Second, cooperatives offered a solution to problems in rural credit but the movement failed to reach the poor. The thesis compares these findings to the results in government reports in order to produce accurate evaluations of the impact of policy on rural credit.

The thesis also analyses data in studies by economists in academic institutions. Eleanor Hough's doctoral dissertation, published in 1932, provides a description of the cooperative movement across India in the late 1920s. Studies by G D Agarwal, S Thirumalai and C W B Zacharias focus on agriculture in the 1940s. These studies present key findings on rural credit and discuss the impact of 1930s intervention on the supply of credit in Madras. Zacharias' work focuses entirely on Madras and two chapters in his book contain descriptions of land and credit markets in the late 1940s. Data from these studies supplements the data from official reports and contributes to graphs showing spatial and temporal variations in rural credit.

The dissertation now turns to the first substantive chapter, focusing on geography as an explanation for regional variation in credit risk and the nature of rural moneylending.

agricultural economics in India.' See Anonymous, "Obituary: Professor M.L. Dantwala." *Indian Journal of Agricultural Economics* 53, no. 4 (1998), 567.

Chapter 2. Climate, Credit Risk and Selective Lending

2.1 Introduction

Moneylenders faced a central problem in providing credit to peasants in colonial Madras: Borrowers regularly defaulted on loans. Official reports in the 1930s suggest that peasants borrowed beyond their means in colonial Madras. Cultivators were over-leveraged and perpetually in debt to moneylenders. When borrowers did have disposable income, this went towards servicing old debts rather than investments into improving production techniques. High default rates, in turn, affected the rural money market in a specific pattern. Whereas merchant communities channelled profits made from trade to agricultural credit businesses in Bombay and Punjab, the urban traders in Madras did not lend in the countryside. Cultivators themselves provided credit to other rural households in the province. High default rates in one year, therefore, constrained money markets in the next. The problem seems to have been more severe in some regions than others. Money markets were more constrained in central areas of the province than nearer the coasts.

What explains regional variation in credit supply? In the current historiography of rural credit in India, the explanations put forward focus on market structure and exploitation. According to contemporary studies in the late-colonial and early post-colonial period as well as mainstream historical accounts, rich moneylenders monopolised the supply of credit. The non-competitive structure of credit markets, allowed the rich to over-price loans and keep the poor in a state of permanent debt bondage. Scholars typically consider the proportion of indebtedness as a measure of the problem. Markets were less competitive and cultivators borrowed more, relative to their income, in some regions than others.[104] This chapter shows that the size of indebtedness, market structure and credit pricing did not necessarily indicate market constraints. Instead, the chapter suggests environmental factors as the source of regional variations in credit supply. In wet and dry districts, lenders adopted different strategies to hedge default risk, and therefore, a general account

[104] Government reports typically associated the size of debt with the level of poverty. The Tanjore District Gazette in 1915, for example, was perplexed that cultivators in a well-off municipality were as indebted as cultivators in a poorer region.

of credit markets based entirely on the lender's power cannot work. That account should factor in strategies to deal with risk.

The reference to geography and regionality is important. The majority of cultivation in Madras was rainfed, however, wet districts benefitted from proximity to irrigated river deltas. Private investment was low and public investment was not high enough in the dry districts, leading to little increase in acreage with access to irrigation infrastructure.[105] The problem persisted throughout the period. The dry corridor in central Madras had an abundance of low-quality red soil and remained poorly irrigated in the colonial and early post-colonial period. Increases in irrigated land during this period largely responded to canal and dam construction. When dams were built, the government designed them poorly and constructed them near fertile areas, leaving the dry districts continually water-scarce. The wet districts were not without a share of problems. Rainfall was volatile and unpredictable across the province. Data from meteorological stations suggests that droughts were common in the central corridor while waterlogging was common in the deltas. However, the risks of crop failure were higher in the dry districts than the wet. This presents a greater set of challenges for money markets in the dry districts than those in the wet districts.

How did these geographical variations impact credit supply? This chapter shows the importance of geography by comparing credit markets in wet and dry districts in the Madras province. Rich cultivators, through crop-diversification, were better-equipped to manage the risks of crop failure than the poor cultivators in the dry districts. This problem was less severe in the wet districts. Smallholders in the wet districts faced a lower risk of harvest failure than the poor in dry districts. As a result, client selectivity was one way for creditors to manage risk. In the dry districts, creditors provided loans to the rich while the poor were excluded from participating in the credit market. In the wet districts, however, money markets were more liquid and cultivators across income categories borrowed from moneylenders. Fragmented credit markets accentuated the problem. Money rarely travelled from villages in one district to villages in another. Credit supply was self-contained within each district.

These findings corroborate the theoretical contributions of development economists, which shows that creditors selectively choose borrowers to mitigate the risk of lending.[106] In conducting this regional analysis, the chapter places geography at the centre of lending barriers and suggests

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[105] Private investment was particularly low and funded just 1.7 per cent of the irrigation construction in India. Public money financed the majority of irrigation works. See Chaudhary et al, *A New Economic History,* 105.

[106] Stiglitz and Weiss, "Credit Rationing"; show that credit rationing is a commonly used method for banks to mitigate lending risk. When prices are not a good indicator of risk, selective client-choosing is evidence of risk mitigation.

credit access as an avenue connecting the environment to regional and household inequality in mid-twentieth century South India.

The chapter uses data from the *Statistical Atlas of the Madras Presidency* to show regional disparities in climate and cropping patterns. Data includes average and range of rainfall over a 60-year period and crops cultivated by acreage. To demarcate the micro-level variations in agriculture, the chapter displays this data in maps, clearly justifying the environmental distinctions between dry and wet regions in Madras. On credit, the chapter uses data from village surveys, conducted by the *Provincial Banking Enquiry* and the *Report on Agricultural Indebtedness*, in the late 1920s and early 1930s. This data is displayed in figures and tables, and analysed in the context of the village's proximity to wet and dry districts. The chapter supplements data with text from district gazetteers, using gazettes from select wet and dry districts to highlight regional disparities, as well as text from government-commissioned crop and agricultural science reports in the 1940s and 1950s.

The chapter proceeds in three stages. The first describes agricultural features in the province and introduces the key areas of distinction between wet and dry districts. The second discusses distinctive features of the provincial credit market. The third presents the mechanisms through which environmental constraints impacted the supply of credit in villages.

2.2 Agriculture in Madras

The majority of cultivation in Madras occupied two landscapes: The fertile deltas near the eastern coast and the dry hinterland in the central parts. The fertile river valleys had a different history of agrarian settlement from the dry hinterland in South India. Prior to British rule, territory in South India was divided into multiple kingdoms. Types of settlement differed by quality of land. Early forms of agrarian settlement crowded around the fertile valleys near the eastern coast and focused on rice production. The value of land increased in the Early Middle Ages and society began to stratify along caste and landownership lines.[107] During this period, the Chola, Pallava and Chera rulers governed the majority of territory along the valleys. The Cholas governed the largest kingdom, most of which later constituted the Tanjore and Ramnad districts of British-ruled India, between the fifth and tenth century. In the Early Modern Period, this region fragmented as multiple militarised rulers clashed over fertile territory. However, agrarian settlements continued to grow in the fertile valleys independent of this political and military shift. In contrast, the dry plains remained more fragmented and less settled until British rule. Territory was divided and

[107] Baker, *An Indian Rural Economy*, 30-33.

governed by chieftains in the early Middle Ages. Rulers from the north-east of Madras, now the Andhra Pradesh state, began acquiring lands in the dry plains in the Early Modern period. Militias and local alliances developed primarily to defend against Mughal and Maratha armies from the Deccan region, which were attempting to obtain land in the South. Throughout these periods, settlement was less entrenched than in the valleys. Cattle rearing and millet cultivation was common. Occupational structure developed alongside military hierarchies and agriculture remained subsistence focused until the nineteenth century.[108] The East India Company was the first ruler to consolidate and govern the various kingdoms as one administrative unit from the early nineteenth century. Madras, during the colonial period, extended from parts of the west coast to the entire south-east coast (see Map 2.1). The Company divided Madras into multiple districts and *taluks* or municipalities. The shift to Crown rule in 1857 created further administrative units, limiting the size of each district. In the post-colonial period, the province was divided and land was shared between 5 Indian states: Tamil Nadu, Andhra Pradesh and parts of Karnataka, Kerala and Orissa.

Outputs from agriculture in rural Madras followed general patterns of cultivation across India. By all measures, agriculture performed poorly in the colonial and early post-colonial period. Figures for GDP and yields show both unproductive cultivation and weak growth throughout the colonial and early post-colonial period. Net domestic product in agriculture grew modestly throughout the period. Heston estimates an average output growth of 0.7 per cent per year between 1868 and 1947.[109] In the same period, population grew rapidly and the share of the labour force in agriculture remained stagnant.[110] Due to low growth in yields, supply of commodities regularly failed to match demand. Indeed, Baker approaches the problem in Madras as a conflict between rising demand and the scarcity of 'productive resources.'[111] Foodgrain production, in tons per person, in India declined by 30 per cent between 1901 and 1946.[112] In the Madras case, population growth outstripped growth in grain output throughout the colonial and early post-colonial period.[113] In the same period, cash crop acreage increased but did not substitute food

[108] Baker, *An Indian Rural Economy*, 34-37.

[109] Heston, "National Income", 397-399.

[110] Baker, *An Indian Rural Economy*; Roy, *The Economic History of India*.

[111] Baker, *An Indian Rural Economy,* 136.

[112] Originally compiled by Sivasubramonian, *National Income*, cited in Heston, "National Income", 410.

[113] For data on population and crop output growth in northern Madras, see G N Rao and D Rajasekhar, "Commodity Production and the Changing Agrarian Scenario in Andhra: A Study in Interregional Variations, c.1910 – c.1947" In *The South Indian Economy: Agrarian Change, Industrial Structure and State Policy c. 1914-1947*, ed. Sabyasachi Bhattacharya, Sumit Guha, Raman Mahadevan, Sakti Padhi, D Rajasekhar and G N Rao, (Oxford, 1991). For similar data on the southern part of the province, see K C Nair and A C Dhas, "Agricultural Change in Tamil Nadu: 1918-1955" In *The*

crops in the majority of districts. The prolonged and economically crippling famine of 1896 evidenced the subsistence crisis of high demand and disrupted supply in rural Madras. In other words, commercialisation and market integration did not remove supply-side constraints in agriculture.[114] Rural Madras, as with the rest of colonial India, contended with generally poor-quality soil, limited irrigation and volatile rainfall. Yet, distinctive geo-spatial features show important regional variation within the province.

By 1930, there were 26 districts in Madras, some with more fertile soils than others. Map 2.1 illustrates the colonial borders, showing rivers and key wet and dry districts of interest. Two major rivers, the Cauvery and Godavari, ran from the west to the east coast. Other rivers were concentrated near the south-east coast. Districts located near the east coast, and downstream the major rivers, contained the most fertile lands. Land in the hinterland was generally dry and soil types were less conducive to high-yielding agriculture. However, some districts in the south-central parts of the province, the areas west of Tanjore, had mixed land types. Washbrook and Ludden show that some central districts had both wet and dry characteristics.[115] Baker refers to these districts, including Coimbatore, Salem and Trichinopoly, as the Kongunad areas where contrasting soil types between neighbouring municipalities within the districts allowed for the cultivation of both rice and millets.[116] More recently, Parthasarathi argues that the varied land types in these mixed districts blurred the boundaries between wet and dry. Canals and channels built in pre-colonial times carried water from rivers to some in-land districts, which typically also had more subsurface water supply than the entirely dry areas.[117]

To focus on the stark environmental contrasts within Madras, the four districts shown in Map 2.1 provide useful representations of wet and dry districts. The map does not include the mixed districts. Land in the East Godavari and Tanjore districts, both located near the eastern coast, sat in fertile river deltas. Land in the Bellary district, located in central South India, was dry but soil types in some areas allowed for cash crop cultivation. Land in the Cuddapah district was dry and soil quality was poor, allowing for the cultivation of millets and, in some municipalities, the

South Indian Economy: Agrarian Change, Industrial Structure and State Policy c. 1914-1947, ed. Sabyasachi Bhattacharya, Sumit Guha, Raman Mahadevan, Sakti Padhi, D Rajasekhar and G N Rao, (Oxford, 1991).

114 See Robin Burgess and Dave Donaldson. "Can Openness Mitigate the Effects of Weather Shocks? Evidence from India's Famine Era." *The American Economic Review* 100, no. 2 (05, 2010): 449-453. The authors suggest that railway construction, and the increase in trade it facilitated, did cushion the size and impact of famines in the late colonial period. However, the frequency of crop failures shows that cultivation continued to be fraught with problems despite the construction of transport infrastructure.

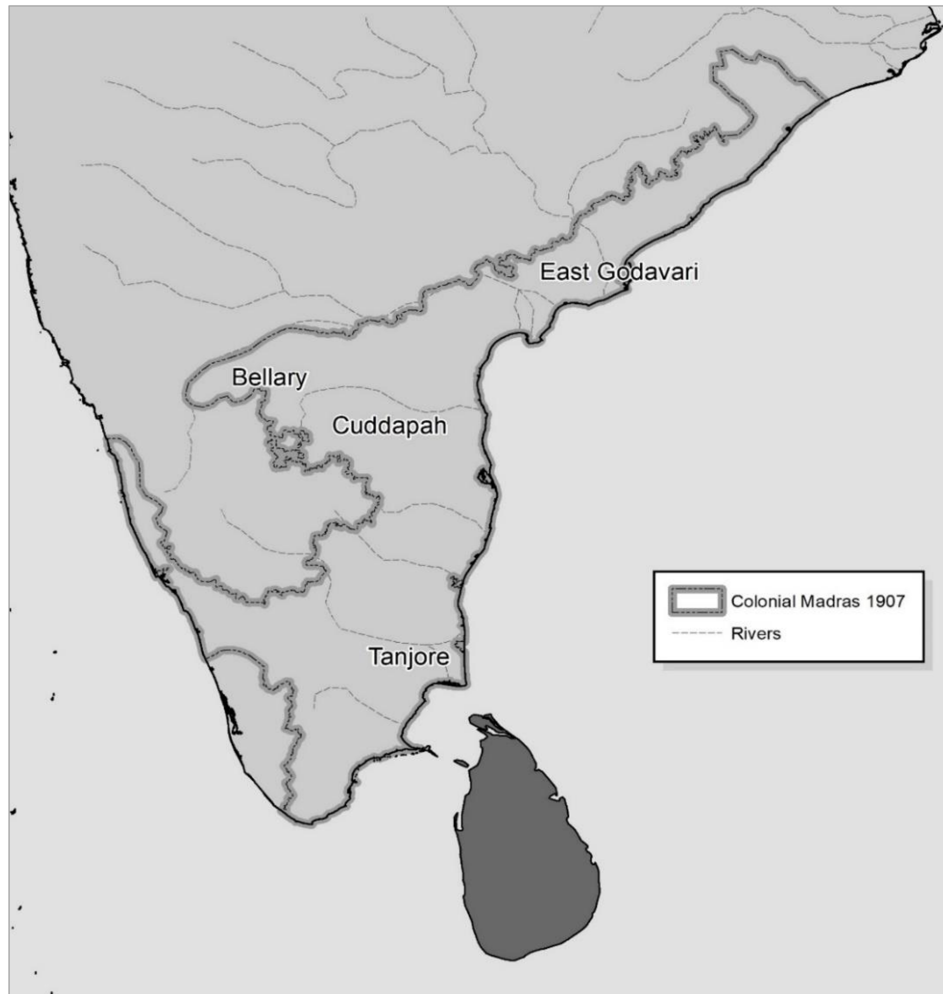
115 Washbrook, "Country Politics", 476; Ludden, *Peasant History*, 60.

116 Baker, *An Indian Rural Economy*, 93.

117 Prasannan Parthasarathi, "Water and Agriculture in Nineteenth-Century Tamilnad." *Modern Asian Studies* 51, no. 2, (2017): 489.

cultivation of pulses. The rest of the chapter makes references to these districts when analysing the impact of these conditions on credit and economic outcomes.

Map 2.1 Wet and dry regions in Colonial Madras



Regional cropping patterns persisted for most of the period. Rice was the most commonly cultivated crop in the deltas while the majority of the dry hinterland produced millets. When the soil allowed, cultivators in some dry districts increased the production of cash crops, primarily cotton and groundnut, during the period. Map 2.2 illustrates cropping patterns in Madras municipalities in 1930. The map includes rice, cereals, cotton and tobacco but excludes oil seeds, pulses, vegetables and spices.

As illustrated in the Map 2.2, Cultivators grew rice in the delta regions while millets were the most commonly grown crops in the hinterland. Tanjore, as an example of a delta region, was the largest rice producing area in the province during the colonial period. In nine out of eleven

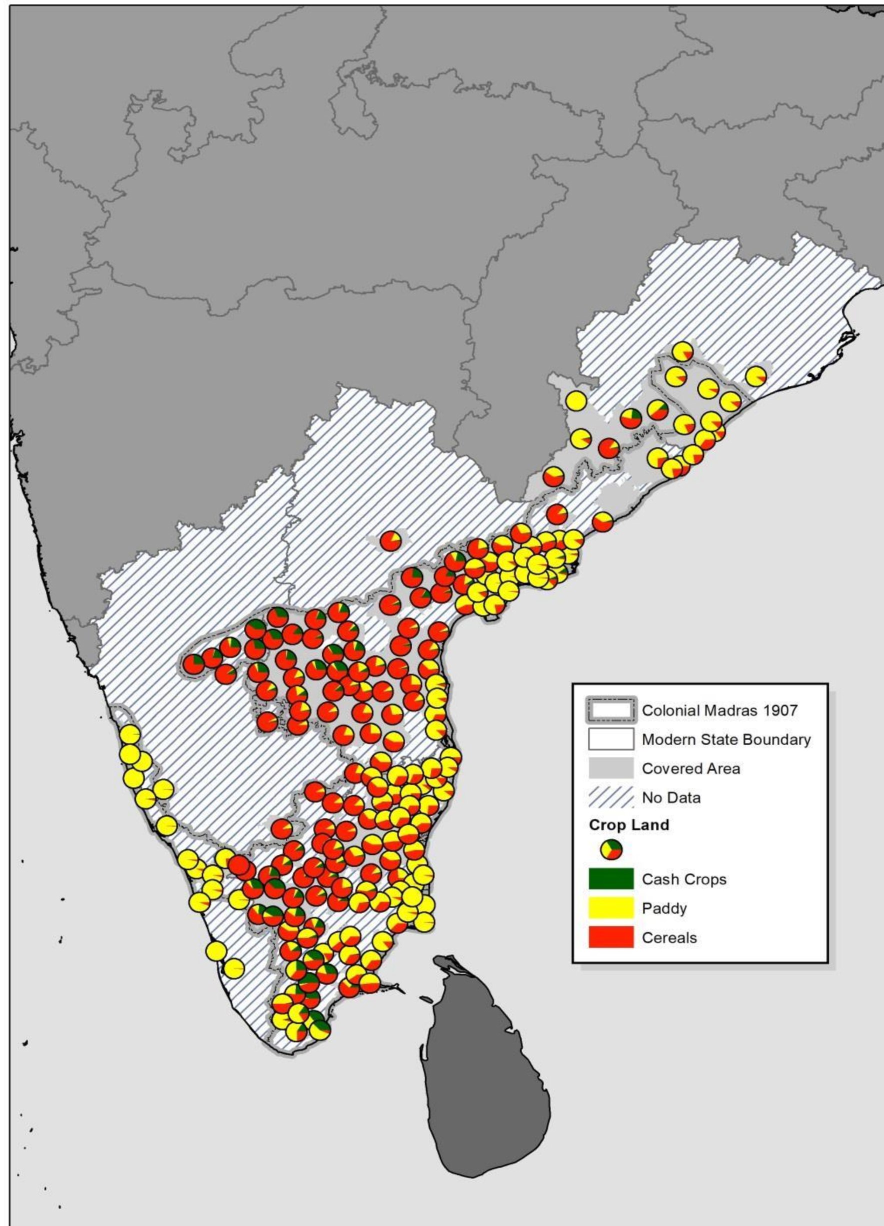
municipalities in Tanjore, rice occupied over 85 per cent of cultivated acreage in 1930.[118] Cereals occupied similarly large shares of acreages in the central districts. Though cultivation of cash crops did see expansion from the mid-nineteenth century, it accounted for a minority of total production by 1930. Cotton was the most popular of the cash crops and was primarily grown in the central corridor. Bellary, Kurnool and Anantapur were key cotton districts by the end of the colonial period. In seven out of eight municipalities in the Bellary district, cereal cultivation accounted for more than 50 per cent of total acreage. Cotton was most prominent in the Siruguppa municipality, occupying 37 per cent of total cultivated acreage.[119] However, even in these regions, millets occupied a larger share of the acreage than cotton. This trend broadly continued in the 1940s and 1950s. The mixed wet and dry districts saw some changes during the period. As illustrated in Map 2.2, rice was grown in some parts of the south-central districts. Cash crop acreage did see some increase with the substitution of groundnut cultivation for cotton and millets in Coimbatore and Salem. Sugarcane production also increased marginally in these parts of the province.[120]

[118] *A Statistical Atlas of the Madras Presidency*, (Madras, 1936).

[119] *Statistical Atlas*.

[120] Rao and Rajasekhar, "Commodity Production and the Changing Agrarian Scenario", 15; Nair and Dhas, "Agricultural Change in Tamil Nadu", 128.

Map 2.2 Crop patterns in 208 municipalities, 1930



Source: *Statistical Atlas.*
Notes: Ratios calculated by the author. Data measures three-year average cropping patterns in number of acres. The pie charts measure the ratio of crop acres to total acres cultivated in each municipality. The source arrives at total cultivated acres by estimating 10-year average. Fallowed and public lands excluded. Cash crops include cotton, indigo, palm, sugarcane, hemp, tobacco, turmeric and 'other'. Cereals include sorghum, five types of millets and 'other.' The map excludes oil seeds, pulses, vegetables and fruits. The data is matched to modern day municipality borders. To adjust for name changes, the author manually provided an index number to each municipality, matching the index numbers in the geo-vector municipality database of the shapefile. In using this method, 24 municipalities could not be matched and the eight municipalities outside the provincial boundaries are the errors in matching, bringing the number of successfully matched municipalities to 208. The eight errors presented do not bias the results in any way as they constitute a small share of the territory in two districts. Two errors, the Kudala and G. Udayagiri municipalities, are located in the Ganjam district. The other six errors, the Gunupur, Jeypore, Koraput, Malkangiri, Nowrangapur and Rayagada municipalities, are located in the Vizagapatam Agency. This region was a semi-autonomous unit of British-ruled Madras and composed mainly of tribal lands.

Table 2.1 Output (tons) per acre in Madras, 1937-1944

Year	*Rice*	*Cotton*	*Millets*
1937	0.48	0.20	0.25
1938	0.48	0.20	0.24
1939	0.42	0.19	0.26
1940	0.45	0.21	0.27
1941	0.48	0.22	0.28
1942	0.49	0.22	0.25
1943	0.44	0.21	0.23
1944	0.45	0.22	0.23

Source: *Agricultural Statistics of India*, (Delhi, 1951).
Notes: Calculations made by the author. Output measured in number of tons across the entire province. Area recorded as number of acres. The table shows the number of tons per acre. The cultivation of sorghum is taken to represent millets in the table. Sorghum was the most commonly grown millet during the period.

Evidence on yields, land prices and population density suggest that cultivators in the wet districts were better off than those in the hinterland. Table 2.1 reports that agricultural productivity stagnated across the region in the 1930s. Any reported output growth was extensive. This trend continued into the early post-colonial period. Increases in crop output in the early 1950s were largely driven by increases in inputs.[121] In this context, rice cultivation outperformed millets and cotton, in yields per acre.[122] Rice cultivators harvested double the amount as cotton and millet cultivators. Millet yields exceeded cotton yields, a trend that continued in the 1950s.[123] Sugarcane cultivation accrued the highest yields. However, sugarcane was cultivated in a small area of the central province and the high yields, therefore, benefitted a marginal share of the rural population.[124]

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[121] *Techno-Economic Survey of Madras: Economic Report*, (Madras, 1961), 81-82.

[122] *Techno-Economic Survey*, 80.

[123] *Techno-Economic Survey,* 81-82.

[124] Nair and Dhas, "Agricultural Change in Tamil Nadu", 130-132.

Cultivation in the wet deltas was more labour and capital intensive than cultivation in the dry districts. Rice cultivation in these districts required more labour than millet cultivation in the dry districts. Delta municipalities reported an average population per cultivated acre of between one and three.[125] In contrast, there was, on average, less than one person per cultivated acre in hinterland municipalities in 1930. Population per cropped acre within municipalities in the East Godavari district ranged from between 1.65 and 2.43. In contrast, the same measure of population density in Bellary municipalities ranged from 0.28 to 0.65.[126] Investment in capital was high in the rice deltas. Rice cultivators regularly invested in purchasing livestock and running ploughs. In areas with cereal cultivation, on the other hand, working and breeding cattle as well as ploughs per capita was much lower.[127] Furthermore, Yanagisawa suggests that working cattle were well-fed and efficient at ploughing in the Tanjore district.[128] In this context, working cattle refers to bullocks and buffaloes while breeding stock refers to cows, young bulls, she-buffaloes and young buffaloes. Goats and sheep are not included in this analysis. Some areas in the hinterland reported large numbers of livestock. However, working cattle was not used for cultivation in these areas. Cultivators in some central municipalities, the Palmaner municipality in the Chittoor district for example, reared livestock and hosted weekly cattle markets. Cattle was either bred in these municipalities or brought to them by breeders in neighbouring regions to sell to cultivators, who were primarily based in the deltas. Data from the Statistical Atlas also shows that carts per capita were higher in the rice-growing municipalities than in the municipalities in the central province.[129]

Land under rice cultivation was more valuable than other land types. According to Baker, land in the rice dominated Tanjore district was above four times as valuable as land in millet producing Salem.[130] From a survey in 1930, the average value per acre of land in the Shiyali municipality in the Tanjore district was around 800 rupees as compared to an average value of approximately 60 rupees in the Adoni municipality in the Bellary district.[131] Revenue collection in 1930 highlights this regional inequality. The government collected above two rupees per person in land revenue

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[125] *Statistical Atlas.*

[126] *Statistical Atlas.*

[127] *Statistical Atlas.*

[128] Haruka Yanagisawa, "Elements of Upward Mobility for Agricultural Labourers in Tamil Districts, 1865-1925", In Sugihara, Kaoru, Yanagisawa, Haruka, and Robb, Peter. Local Agrarian Societies in Colonial India: Japanese Perspectives, (Surrey, 1996), 208.

[129] *Statistical Atlas.*

[130] Baker, *An Indian Rural Economy*, 319.

[131] *Statistical Atlas.*

from residents in delta districts. The corresponding figure for the hinterland was below one rupee in 1930.[132] How did soil and rainfall vary between the districts?

Water storage is at the centre of discussion on agricultural variation in Madras. Water, according to Parthasarathi, 'is life in Tamilnad.'[133] In the Chola period, irrigation infrastructure was built in two forms and in two regions. The Chola rulers invested in the construction of channels and dams to divert water from the Cauvery river to deltas in Tanjore.[134] The most famous example of such constructions was the Grand Anicut, built early in Chola rule. While large projects were concentrated in the deltas, tanks were common forms of water storage in the south-central districts, located primarily in Trichinopoly.[135] During British rule, this regional concentration continued. The government constructed dams, canals and channels near the river deltas, while replacing tanks, that were poorly maintained in the pre-colonial period, with wells in the south-central districts.[136] In the process, water access increased substantially in the wet districts, partially in the mixed districts and insignificantly in the driest districts.

Financial constraints, modernisation agendas and political conflicts explain the distribution of irrigation infrastructure in Madras. Raising enough capital, and seeing returns on these investments, was a significant determinant in expanding irrigation infrastructure. When serious discussion around irrigation began in the mid-nineteenth century, the government first attempted to encourage private British firms to invest in the construction of large irrigation projects in Madras.[137] When this attempt failed, the government undertook the responsibility themselves but raised little funding in London capital markets. As a result, the government extended large projects, including canals and dams, in higher revenue earning areas, the districts near river deltas in particular.[138] Construction of the Upper Anicut in the nineteenth century and the Mettur Dam in the 1930s were examples of the dams and channels that distributed water from the Coleroon and Cauvery rivers to the deltas in Tanjore. The Cauvery-Mettur project, initiated by the colonial

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132 *Statistical Atlas*.

133 Parthasarathi, "Water and Agriculture', 487.

134 Dharma Kumar, "Private Property in Asia? The Case of Medieval South India." *Comparative Studies in Society and History* 27, no. 2 (1985), 343.

135 Parthasarathi, "Water and Agriculture', 502.

136 Yanagisawa, "Elements of Upward Mobility", 202; Mosse, David. "Colonial and Contemporary Ideologies of 'community Management': The Case of Tank Irrigation Development in South India." *Modern Asian Studies* 33 (1999): 306-308; Parthasarathi, "Water and Agriculture', 504-508; Aditya Ramesh, "The Value of Tanks: Maintenance, Ecology and the Colonial Economy in Nineteenth-century South India." *Water History* 10, no. 4 (2018), 268-269; Velayutham Saravanan, *Water and the Environmental History of Modern India*, (London, 2020), 37.

137 Aditya Ramesh, "Indian Rivers, 'Productive Works', and the Emergence of Large Dams in Nineteenth-Century Madras." *The Historical Journal*, 2020, 5-8.

138 Ramesh, "Indian Rivers"; Saravanan, *Water and the Environmental History*, 38.

government in 1934, involved the construction of a seventy-mile canal which carried water from the Cauvery River to the plains, an artificial reservoir of 59 square miles to hold channelled water and a dam to prevent flooding. The New York Times praised the government in Madras for constructing the 'largest masonry dam in the world' and for extending '301,000 acres of new irrigation to the existing 1,000,000 acres of delta land.'[139] The project irrigated rice cultivation primarily in the Tanjore and South Arcot districts.

The regional allocation of smaller infrastructure including wells extended the government's desire to modernise productive areas.[140] The building of new wells and replacing old tanks in Coimbatore and Salem during the nineteenth century reflected this agenda. By 1900, there were 502 wells in the Coimbatore district, almost one-quarter of total wells in all the Tamilnad districts.[141] The focus on the mixed districts continued in the 1950s where the post-colonial government invested in extending canals from the Cauvery and Noyyal rivers to the Coimbatore and Erode districts.[142] In contrast, large projects and infrastructure to support groundwater extraction in the driest districts, such as Bellary, remained limited throughout the period.[143] Political conflicts over water resources added an additional barrier to the extension of canals and dams. In the colonial period, the Cauvery river ran through the Mysore Princely State and the Madras Presidency. Governments of both provinces signed treaties in 1892 and 1924 on the sharing of water from the river. The construction of canals was either blocked or legally challenged if they were deemed to violate the treaties' terms by diverting shared water away from either province.[144]

In short, the wet and mixed districts saw improvements while dry districts remained dry during the period. Data from official reports further confirms that irrigation infrastructure was concentrated in select regions. According to an official survey, 50 out of 241 municipalities reported a ratio of irrigated to cultivated land above 50 per cent. In 80 per cent of municipalities, the majority of cultivated land was unirrigated in 1930.[145] This trend did not change during the colonial and early post-colonial period. The average ratio of irrigated to cropped land increased marginally for the majority of the province.

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[139] 'Big Irrigation Job under way in India' *The New York Times,* 30 June 1930.

[140] Ramesh, "The Value of Tanks"; Ramesh, "Indian Rivers".

[141] Parthasarathi, "Water and Agriculture", 497.

[142] Saravnan, *Water and the Environmental History*, 148.

[143] Parthasarathi, "Water and Agriculture", 497.

[144] Velayutham Saravanan, "Technological Transformation and Water Conflicts in the Bhavani River Basin of Tamil Nadu, 1930-1970." *Environment and History* 7, no. 3 (2001): 289-334; *Report of the Cauvery Water Disputes Tribunal Volume II: Agreements of 1892 and 1924*, (New Delhi, 2007).

[145] *Statistical Atlas.*

Irrigation investment increased in the deltas, such as the deltas in the Tanjore district, while dry regions stagnated. Following the construction of the Mettur Dam, as illustrated in Table 2.2, the ratio of irrigated land to net cultivated land in the Tanjore district showed steady increase between 1931 and 1951. Similarly, government reports suggest that land was fertile and well irrigated, due to rivers and high private investment in the regions near the western coast. Land in the western districts was conducive to rice cultivation as well as the cultivation of non-food crops such as coconut and rubber. Dismissing the possibility of drought in the South Kanara district, for example, the government reported, 'Famine is unknown and the district produces more food grain than is required.'[146] Accordingly, Yanagisawa notes that rice cultivation became more intensive in the early to mid-twentieth century.[147]

Table 2.2 Ratio of irrigated land to net area sown, 1921-1951

Region	*1921*	*1931*	*1941*	*1951*
Madras	0.27	0.26	0.27	0.31
Tanjore	0.74	0.74	0.80	0.85
Cuddapah	0.21	0.21	0.21	0.23
Bellary	0.02	0.02	0.02	0.03

Source: *Census of India*, 103-105.
Notes: Calculations made by the author. The ratio calculated by dividing the reported figures for irrigated area by the net area sown for the given year.

Soil quality increased proportionally to water access. Deltas around rivers on the west and eastern coast were blessed with alluvial soil. Rusty-red lateritic soil was commonplace in low-lying areas partially inland from deltas. Both soil types were more conducive to surface water retention than other black and red soil varieties, enabling rice cultivation in the deltas.[148] These fortunes were, to some extent, marred by mineral content in the soils. Nitrogen and phosphoric acid levels were low in the Madras soil, creating problems for water absorption across the province.[149] Nitrogen in organic manure only partially solved the problem. Cultivators in Madras did not

[146] *Statistical Atlas*, 13.

[147] Yanagisawa, "Elements of Upward Mobility", 202-210.

[148] *Techno-Economic* Survey, 69-75.

[149] *Techno-Economic* Survey, 69-75.

commonly use artificial fertilizers in the colonial and early post-colonial period.[150] This problem, again, was more severe in the dry areas. Cultivators in Ramnad, Tanjore and Tinnevelly districts reported higher manure and fertilizer use in the early-twentieth century.[151] Land in the central corridor was a mix between black and red soil types. The northern part of the central corridor, in districts such as Bellary, Kurnool and Anantapur, had a larger amount of black soil than other areas in the province, enabling some cotton cultivation in these areas.[152] Land across the rest of the province had various forms of red soil. Red loam, or a mix between sand and clay, was the most common soil type across the central part of the province. Without sufficient rain or irrigation support, this porous soil was not nurtured enough to cultivate crops other than dry millets.[153] Sandy red soil in Coimbatore and Salem differed in texture, enabling the production of groundnuts in the late-colonial period.[154]

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[150] For a discussion on the use of organic fertilizers in indigo farms in Bengal, see Prakash Kumar, *Indigo Plantations and Science in Colonial India*, (Cambridge, 2012). According to, Srabani Sen, "Scientific Enquiry in Agriculture in Colonial India: A Historical Perspective", *Indian Journal of History of Science* 45 no. 2 (2010): 199-239, natural fertilizer did not provide enough nitrogen to deficient soils and imports of artificial fertilizer was low in the colonial period.

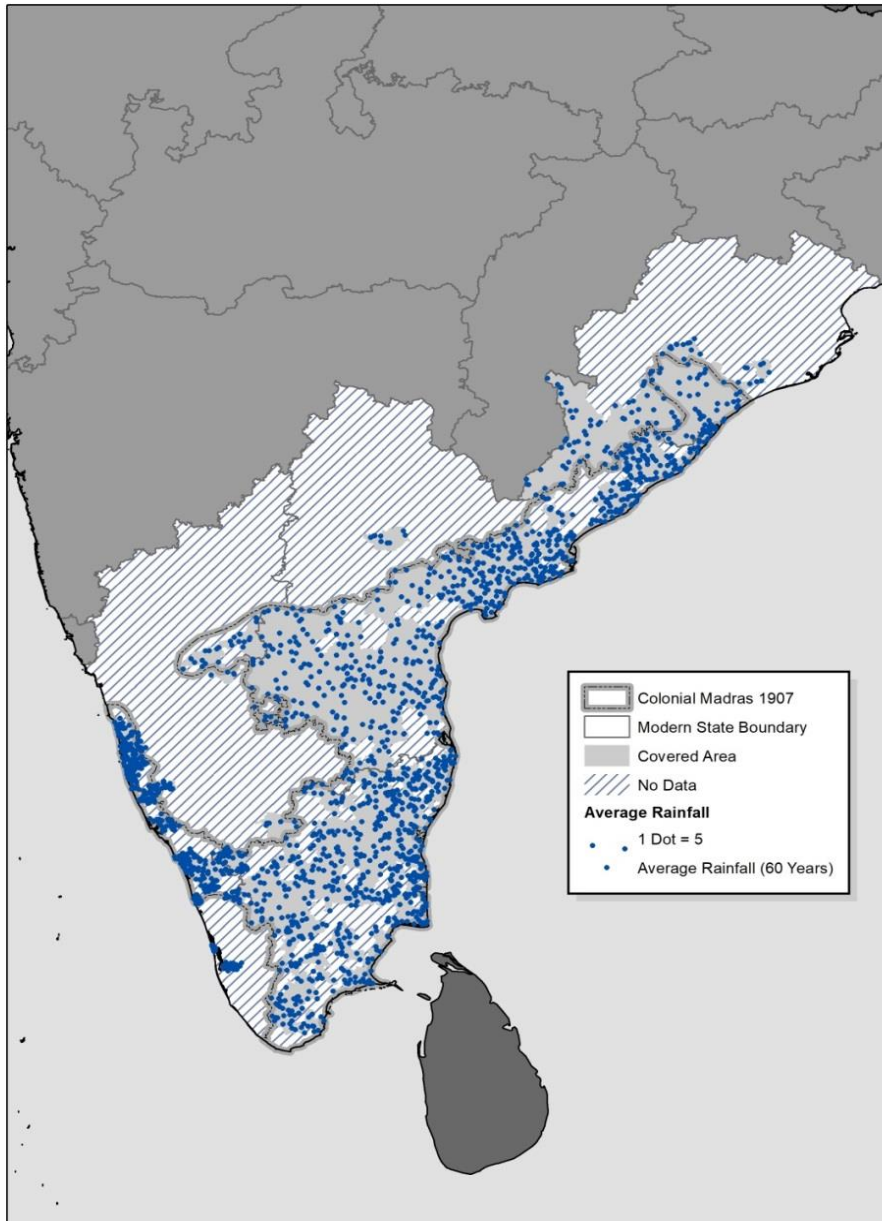
[151] Yanagisawa, "Elements of Upward Mobility", 205-208.

[152] *India Crop Calendar*, (New Delhi, 1954), 5-8.

[153] *Techno-Economic* Survey, 69-75.

[154] *India Crop Calendar*, 5-8. The loose surface later enabled more efficient draining, when compared to loam or clay textures, creating a suitable environment for oil seed cultivation.

Map 2.3 Average annual rainfall (inches) in 208 municipalities, 1870-1930



Source: *Statistical Atlas.*
Notes: The British government set up meteorological stations in most municipalities from the late nineteenth century onwards. In most cases, the source calculates average annual rainfall from 1870 to 1930. In a minority of cases, meteorological stations were established later. In these cases, the source calculates the average from the start of the station to 1930. In a handful of municipalities, the meteorological stations were only 15 years old by 1930. For example, a meteorological station was created in the Pamarru municipality in the Kistna district in 1915. The data for this municipality is based on a 15-year average. The author uses data from the nearest meteorological station when municipalities did not have one of their own. The method of data matching, and the errors it produced, are similar to Map 2.2.

The British-ruled government invested in meteorology from the late-nineteenth century. Frequent droughts and famines persuaded government officials to record weather patterns across

colonial India.[155] By 1930, most municipalities had their own meteorology stations, recording daily rainfall patterns. The stations could not predict future weather but record past climate patterns. Large annual swings in rainfall limited the cultivator's potential to use past patterns as a method to predict the future. Analysing average annual rainfall over a 60-year period, Map 2.3 illustrates regional variation in climate patterns across municipalities.

With regionally concentrated high-quality soil and irrigation infrastructure, rainfall patterns drove differences in agricultural yields. In years with weak rainfall, crops in deltas had a higher chance of survival. Yet, as shown in Map 2.3, delta areas had significantly higher rainfall than the hinterland. Data from meteorological stations in eleven municipalities shows that the Tanjore district experienced 45.35 inches of rainfall in an average year. In contrast, an average year in the Cuddapah district experienced 27.16 inches of rainfall. As an example of dry and poorly developed district in colonial Madras, Bellary had an average annual rainfall of 23.03 inches.[156] On the dry central corridor, the Census reported in 1951 that,

> The main area liable to periodical famines in Madras State comprises the whole of Anantapur district the eastern taluks of Bellary district and the western taluks of Kurnool district adjoining Bellary district. Inadequate and ill-distributed rainfall in both the monsoons and consequent failure of crops are of frequent occurrence in this area.[157]

Madras was subject to a monsoon climate with significant seasonal changes in rainfall. The majority of annual rainfall was concentrated in short bursts of two to three months. Colonial India was subject to two seasonal monsoons. The southwest or summer monsoon ran from approximately June to September and the northeast or winter monsoon ran from approximately October to December. As such, cultivation in rural Madras was seasonal. Crops sown before and harvested after the southwest monsoon were referred to as the *kharif* crop. Crops sown before and harvested after the northeast monsoon were referred to as the *rabi* crop. A failure or delay in the monsoon led to crop failure. Moreover, cultivation in the majority of colonial Madras relied heavily on the northeast monsoon.[158] The delta districts, in the north of the province in particular, got a 'fairly distributed rainfall from both monsoons.'[159] However, for the majority of central districts,

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155 Amrith, "Risk and the South Asian Monsoon", 19.

156 *Statistical Atlas*.

157 *Census of India Vol. III Madras and Coorg Part I*, (Madras, 1951), 8. Hereafter source referred to as *Census of India*.

158 *Census of India*, 95. Areas on the western coast benefitted from the southwest monsoon. However, the majority of cultivation in the province took place on the eastern section.

159 *Techno-Economic Survey*, 72.

annual yields were unpredictable and relied on rainfall patterns in a concentrated three-month period. Describing the status of cultivators in Bellary, one district surveyor commented in 1915,

> The result is that the average ryot of Bellary is poor….His food supply depends on the rains of June and July; if two successive monsoons fail his cattle die in thousands; and he himself, as will be seen later, lives from crop to crop and as usually hardly emerges from one famine before he is submerged under another.[160]

In short, low public investment and tropical climate created a fragile agriculture industry in colonial and post-colonial Madras. Water scarcity, poor soil quality and insufficient irrigation facilities led to a high likelihood of crop failure in a large part of the province. The chapter now turns to variations in credit supply across wet and dry districts.

2.3 Credit Supply in Rural Madras

Private, informal credit was a valuable input in rural India. Cultivators, particularly smallholders and tenants, relied on credit to carry out production. Private capital accumulation was too low to drive investment. Commercial banks and regulated forms of finance did not supply credit to rural cultivators. Corporate, joint-stock and indigenous banks operated in cities but not in rural villages. Cooperative banks provided some credit but only captured a minimal share of the rural market. From an official report in 1935, moneylenders captured 93 percent, cooperatives captured six per cent and government welfare loans captured one per cent of total market share.[161] Rural credit markets were active, despite the absence of a formally regulated market structure. Demand for credit was high, not always matched by supply.

The credit market in Madras presented distinct features, relative to similar markets in other provinces. Though moneylenders controlled the supply of credit across rural India, they differed by type. Urban traders and merchant bankers were moneylenders to cultivators in Bombay and Punjab.[162] Cultivators controlled the supply of credit in Madras.[163] Rural households with disposable income provided working capital loans to other cultivators during the colonial and early

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[160] *Madras District Gazetteers: Bellary Vol. I*, (Madras, 1915), 91. Hereafter, source referred to as *District Gazetteers: Bellary*.

[161] *Report on Agricultural Indebtedness*, (Madras, 1935), 40.

[162] Assessments of rural credit in Bombay and Punjab focus on the Gujarati, Marwari or Bania moneylenders. Writing on debt in Punjab in 1925, Malcolm Darling categorises moneylenders into sub-castes of Bania, Arora and Khatri while differentiating them according to the level of exploitation they inflicted on peasant borrowers.

[163] Sources classify these lenders as 'agriculturist moneylenders'.

post-colonial period.[164] Colonial officials referred to the merchant bankers as 'professional moneylenders' and cultivator creditors as 'agriculturist moneylenders.' They differed by their primary occupation. Whereas professional moneylenders were moneylenders by profession, agriculturist lenders cultivated land and provided credit if they had money to lend. As noted in the Provincial Banking Enquiry, 'it is doubtful whether even half of the moneylending of the Presidency is done by professional moneylenders. The evidence we have indicates that the major part of it in villages is from one *ryot* to another while the rural moneylender who does nothing but lend is rare.'[165]

Indigenous banking houses in Bombay, such as the *Marwari* traders, operated credit businesses with branches in the cities and agents deploying money in rural areas.[166] Similar to the *Marwari* lending houses, the *Nattukottai Chettiars* operated banking houses in Madras. They provided credit to export businesses and urban industries in South India, as well as plantations in South-east Asia. The *Chettiar* bankers did not lend to farming-households in Madras. These businesses did not have a specific aversion to lending in agricultural settings. The *Chettiars* operated large funds that provided loans to rubber plantations in Burma and Malaya from the early twentieth century. Similarly, banking businesses run by the *Kallidaikurchi Brahmins*, were headquartered in urban centres around the southern districts of Tinnevelly, Ramnad and Madura but provided large volumes of credit to plantations in Malaya.[167] The combination of high default rates and expensive enforcement deterred indigenous banking houses from lending in the countryside. Enforcement is discussed in greater detail in the next chapter.

As shown in Table 2.3, agriculturist moneylenders dominated the supply of credit in villages. A government report in 1935 classified village moneylenders according to their profession. The survey finds that lenders cum cultivators were more common in rural credit markets than community banking houses. Over three-quarters of moneylenders were agriculturists in 114 out of 141 surveyed villages in 1935. The only exception to this rule was the Nellore district where, in the two villages surveyed, 58 professional moneylenders competed with 29 agriculturist moneylenders. Does this have implications for market structure?

In most cases, several moneylenders operated within villages. Large landowners did lend money, as did smaller landowners and tenants with disposable income. Indeed, village surveyors

164 The source of the capital for rural moneylending largely came from profits in cultivation. Cultivators with surplus capital were the primary source of credit in the region. See *Madras Provincial Banking Enquiry Committee Report, Volume I*, (Madras, 1930). Hereafter, source referred to as *Provincial Banking Enquiry*.

165 *Provincial Banking Enquiry,* 220.

166 Catanach, *Rural Credit in Western India*.

167 *Provincial Banking Enquiry*, 30.

in 1930 reported that, 'there are moneylenders everywhere.'[168] As illustrated in Table 2.3, 2429 agriculturist moneylenders operated in 141 surveyed villages in 1935. The ratio of moneylenders to number of villages suggests that credit markets operated competitively. There was some variation between districts. There were fewer lenders per village in wet districts when compared to villages in dry districts. This figure was driven by select villages. For example, there were only 22 moneylenders in five surveyed villages in South Kanara and 14 lenders in the eight villages in Tanjore. Market structure differed in other wet districts. There were 17 agriculturist moneylenders in the one village surveyed in the East Godavari district and 420 lenders in eight villages in the Tinnevelly district. In the dry districts, markets in Bellary were more concentrated than others. There were nine lenders in the two surveyed villages in Bellary. In the majority of other dry districts, there were between 20 and 30 lenders per village.

Table 2.3 Moneylenders in 141 villages, 1935

Village Type	*Villages (1)*	*Agriculturist Lenders (2)*	*Total Lenders (3)*	*Ratio (2) to (3)*	*Ratio (2) to (1)*
Mostly Wet	73	1184	1357	0.87	16.22
Mostly Dry	66	1245	1436	0.87	18.86

Source: *Report on Agricultural Indebtedness*.
Notes: Data extracted from a survey of 141 villages in Madras. Village data aggregated to district level in the source. The government surveyed between 1 and 16 villages in each of the 25 districts. The source does not provide names of the villages. The distinction between 'Mostly Wet' and 'Mostly Dry' is made by the author. Mostly Wet villages are in the districts where the majority of cultivated acreage produced rice. The opposite is the case in the Mostly Dry villages. Mostly Wet districts include: Ganjam, East and West Godavari, Kistna, Nellore, Chingleput, South Arcot, Tanjore, Ramnad, Tinnevelly, Malabar and South Kanara. Mostly Dry districts include: Guntur, Vizagapatam, Chittoor, Salem, Coimbatore, Trichinopoly, Madura, Kurnool, Bellary, Anantapur, Cuddapah. Total Lenders measures the number of agriculturist and professional moneylenders in the villages. Calculations made by author.

The competitive market structure does not imply that money was easily accessible in rural districts. The distinctive features of moneylending in Madras constrained the availability of credit in crisis years. Indigenous bankers in other provinces, such as the *Marwaris*, ran large-scale lending businesses by providing credit to members of their community at a lower price than credit to other borrowers in cities and villages. Moneylenders residing in villages borrowed from the indigenous banking houses at a lower cost than the price of their loans to poor peasants. Indeed, when this system operated in Madras, village moneylenders borrowed, 'at 8 to 12 per cent from the more

[168] *Provincial Banking* Enquiry, 220.

wealthy Marwari bankers' and credited this money to poor peasants at much higher prices.[169] Evidence suggests that petty traders in villages, such as shopkeepers, also borrowed from indigenous banking houses in cities and provided credit to cultivators. Shopkeepers borrowed at a lower cost from bankers than cultivators did on the rural credit market. However, linkages between rural lenders and urban bankers were rare in Madras. In practice, money did not flow easily from city bankers to peasants. The cultivators cum moneylenders in Madras relied on their disposable income to lend to peasants. On the movement of money in rural Madras, the Provincial Banking Enquiry reported, 'the ryot moneylender does his business almost entirely on his own capital.'[170]

Disposable income was the requirement to lend, but was easily constrained in Madras. Wealthy landowners with savings allocated a part of this disposable income to moneylending. Less wealthy cultivators allocated profits made in year *n-1* to the credit market in year *n*.[171] Creditors may have also been borrowers in the same year or borrowers in one year and creditors in the next. Borrowers and lenders were not necessarily distinct agents in the credit market. Indeed, the colonial government reported that a cultivator cum moneylender 'may borrow for his own needs during the cultivating season.'[172] This feature created a distinctive risk structure. Crop failures simultaneously bankrupted borrowers and constrained the supply of money. Cultivators without profit in year *n-1* both defaulted on loans and restricted the availability of credit in year *n*.[173] If professional moneylenders supplied credit, one would expect that they would have a diversified portfolio and can absorb risks better by passing it on to other more secure loans. If borrowers and lenders were both agriculturists there is much greater risk of contagion, and an inability to absorb risks. A crop failure will have impact on all parties, and pass on from party to party more quickly. In other words, any fragility in the agricultural sector reinforced credit and investment constraints in localised village credit markets. Cultivators recycled money within villages but this led to liquidity constraints following harvest failure.

The seasonality of the money market further affected short-term fluctuations in credit supply. Monsoons in tropical Madras were biannual with cycles of cultivation operating around the timing of rainfall. Crops were either sown in June for harvest in October or sown in September for harvest in January. The majority of cultivation depended on rainfall in the three months between

[169] *Provincial Banking Enquiry*, 219.

[170] *Provincial Banking* Enquiry, 220.

[171] P G K Panikar, *Rural Savings in India,* (Bombay, 1970), shows that this trend persisted in the early post-colonial period. Credit was supplied by cultivators with disposable income. Cultivators preferred to lend than to save.

[172] *Provincial Banking Enquiry,* 220.

[173] *Provincial Banking* Enquiry, 220.

September and December. The demand for credit was high in the autumn while the demand for repayment was expected at the end of the spring harvest when commodities were to be traded.[174] Liquidity in the formal money market responded to seasonality in agriculture. Roy demonstrates that seasonality affected the market for formal banking credit across colonial India.[175] Seasonality and yearly climate fluctuations constrained overall money supply. As such, commercial and indigenous banks were indirectly exposed to the seasonal fluctuations. Bank rates and bill discounting, or *bazaar bill*, rates varied according to changes in the demand for agricultural credit.[176] Bank rates were low on the eve of the cultivation season when the supply and demand for money were high. Rates were high after in the off-season when the demand and supply of money were low.

As a result of this link between credit and seasonality, moneylenders in rural villages commonly provided loans on a short-term basis of four to six months.[177] Lenders provided loans in monthly instalments, matching changing input requirements during the production cycle. Cultivators borrowed in one month to cover the costs of fertilizer while borrowing in another to finance the renting of cattle.[178] Lenders charged monthly rather than annual interest rates. With the credit market operating on such short-term arrangements, default rates were high and credit was constrained after a bad season. Official surveys echoed the concern that, 'a crop failure may reduce the debtor to bankruptcy.'[179] In the Madras case where moneylenders were also cultivators, crop defaults also resulted in reduced disposable income to lend in the next agricultural season. Liquidity was volatile, expanding after good harvests and significantly constrained after bad seasons. In the decade between 1938 and 1948, the monsoon failed three times. The provincial government marked cycles in 1938-39, 1945-46 and 1947-48 as 'bad years' with a more serious famine in the winter of 1945.[180] Despite initiatives by the colonial and early post-colonial governments, crop insurance schemes were rejected across the region. The contention with the possibility of insuring crops was always the extraordinary indemnity costs given the frequency of failed harvests.[181]

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[174] Roy, "The Monsoon", 15-20.

[175] In this context, formal credit refers to loans provided to merchants, firms or traders. The creditors to these businesses in colonial Madras were either large indigenous banking communities, auction houses or public and private banks.

[176] Roy, "The Monsoon"; Roy, "Climate and the Economy".

[177] Strickland, "Cooperation and the Rural Problem", 510.

[178] *Provincial Banking Enquiry*, 86-88.

[179] *Provincial Banking Enquiry*, 221.

[180] *A Scheme of Crop Insurance for the Province of Madras*, (Madras 1949), 9.

[181] For barriers to designing crop insurance schemes in colonial and contemporary India, see V M Dandekar, "Crop Insurance in India." *Economic and Political Weekly* 11, no. 26 (1976): A61-80; Pramod Kumar Mishra, *Agricultural Risk, Insurance and Income : A Study of the Impact and Design of India's Comprehensive Crop Insurance Scheme*, (Aldershot, 1996);

Given the frequency of failed harvests, it is unsurprising that default rates were high in colonial Madras. According to the Banking Enquiry's survey of 76 villages in the late 1920s, creditors provided 37 per cent of total loans for the repayment of prior debts. As illustrated in Table 2.4, 2.2 million rupees out of the total 5.9 million rupees credited to borrowers went towards servicing previously defaulted debts in all the villages surveyed. The problem was not unique to the year this data was collected. The Banking Enquiry reported on credit markets in the 1928-1929 season, prior to the commodity price crash in the early 1930s.[182] Prices declined from the previous year but not enough to cause structural changes in default rates.[183] Moreover, high default rates were a systematic concern in the rural credit market. Naidu and Vaidyanathan, writing in a period of rising commodity prices in the late 1930s, commented that 'the root cause of the indebtedness of the Indian peasant is the insufficiency of his income which is the result of uneconomic holdings, lack of attention to improved methods of cultivation, manuring, irrigation or the introduction of seasonal crops…and the frequent failure of crops due to bad seasons.'[184]

If, as noted by Naidu and Vaidyanathan, agricultural fundamentals were the root cause of high default rates, then Table 2.4 and Figure 2.1 present a regional puzzle. Default rates were higher in villages located in wet districts when compared with those in the dry districts. A larger percentage of loans in the wet villages went towards servicing previous defaults than in the dry villages. Figure 2.1 illustrates this stark contrast by comparing select wet and dry villages. The villages recorded in the Bellary district were located in the Adoni municipality. The area contained, 'a light black soil' and was 'at the mercy of deficient monsoons.'[185] Yet, each of the three villages in this region reported ratios of debt servicing to new loans of under 20 per cent. In contrast, the Gollapallam village in the Coconada municipality in the East Godavari district reported similar ratios of 90 per cent. The municipality was well located, by the Godavari river. The Tanjore district did show lower default rates on average. However, one village reported prior debt servicing rates above 40 per cent which was higher than the rates in Bellary. This is particularly puzzling as the village surveyed in Tanjore was located in the Shiyali municipality, a fertile location near the Cauvery River.

Reshmy Nair, "Crop Insurance in India: Changes and Challenges." *Economic and Political Weekly* 45, no. 6 (2010): 19-22.

[182] The impact of the Depression on the credit market is discussed in Chapter 4.

[183] McAlpin, "Price Movements".

[184] Bijayeti Venkata Narayanaswami Naidu and P Vaidyanathan, *The Madras Agriculturists' Relief Act: A Study*, (Annamalainagar, 1939), 2.

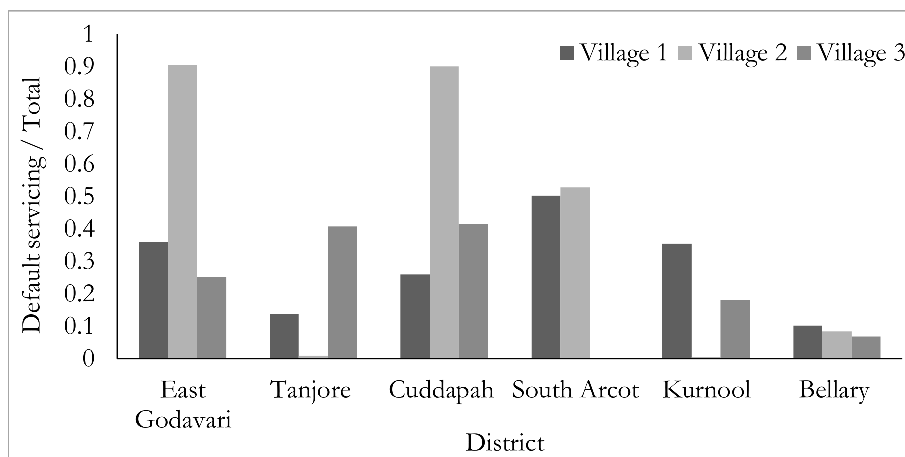
[185] *District Gazetteers: Bellary,* 84-92.

Table 2.4 Default rates in 76 villages, 1929

Village Type	*Villages*	*Total Borrowing (Rupees)*	*Prior Debts (Rupees)*	*Default Servicing (per cent)*
Mostly Wet	33	2,987,151	1,199,589	40
Mostly Dry	43	2,885,445	975,327	34
Total	76	5,843,836	2,157,918	37

Source: *Provincial Banking Enquiry*.
Notes: Data extracted from a survey of 76 villages in 1929. The grouping of Mostly Wet and Mostly Dry conducted in the same format as Table 2.3. The villages are grouped based on the district they are located in. The Banking Enquiry Committee surveyed select villages in each district except Malabar. Prior Debts refers to the amount borrowed to repay defaulted loans. Default Servicing measures the percentage of loans, relative to total lending in the village, provided to repay defaulted loans. Ratios calculated by the author.

Figure 2.1 Default rates in select villages, 1929



Source: *Provincial Banking Enquiry*, 60-70.
Notes: East Godavari, Tanjore and South Arcot were wet districts and primarily rice producing. Cuddapah was dry and millet or pulses producing. Kurnool and Bellary were dry and either cereal or cotton producing. The report surveyed between 2 and 3 villages in each district. Ratio calculated in the same format as Table 2.3 but presented in number form instead of percentage.

Why were default rates lower in dry villages than in wet villages? One explanation is that peasants in wet districts over-borrowed, either by increasing the accumulation of consumption debt or by borrowing at high prices. Influential commentators on credit including Malcolm Darling and C F Strickland, argued that peasants borrowed beyond their expected income to spend on weddings and lavish ceremonies.[186] In practice, however, data from the Provincial Banking Enquiry shows that the majority of borrowing was for investment rather than consumption purposes. As illustrated in Table 2.5, lending for ceremonial expenses, as a ratio of total fresh lending, accounted

[186] Darling, *The Indian Peasant*; Strickland, "Cooperation".

for 15 per cent in wet villages and 16 per cent in dry villages. Borrowing to pay old tax bills accounted for a much smaller share, two and four per cent in wet and dry villages respectively. The majority of credit provided went towards working capital expenses and large capital investments including land purchase and education. Lending in Tanjore and Bellary corroborates this assessment. The ratio of consumption to total credit, in this case the ratio of ceremonial to total lending, was 16 per cent in Tanjore and 24 per cent in Bellary. Working capital credit exceeded consumption credit in both regions. More puzzling, consumption debt was higher, but default rates were lower, in Bellary than in Tanjore. Credit for large capital investments was higher in Tanjore than in Bellary. Credit for the purchase of land accounted for 34 per cent of total lending in the three villages surveyed in Tanjore.[187]

Table 2.5 Credit composition in 76 villages, 1929

Village Type	*Villages*	*Fresh Lending (Rupees)*	*Ceremonies (per cent)*	*Tax Payments (per cent)*	*Working Capital (per cent)*
Mostly Wet	33	1,787,562	15	2	45
Mostly Dry	43	1,910,118	16	4	57
Tanjore	3	206,500	16	0.2	28
Bellary	6	354,802	24	1.1	36

Source: *Provincial Banking Enquiry,* 60-70.
Notes: The distinction of Mostly Wet and Mostly Dry follows the same format as Table 2.3. The Banking Enquiry Committee estimated the total value of loans provided in each village. This was categorised by purpose of borrowing. Fresh Lending is the total lending minus the lending for the repayment of prior debts. Ceremonies is the ratio of lending for marriage and ceremonial expenditure to total lending. Tax Payments is the ratio of lending for the payment of old land tax bills to total lending. Working capital includes borrowing for cultivation expenses, trade expenses and expenses for land improvements. The table excludes credit for large capital expenses including land purchase, construction and education.

On credit pricing, it is plausible to suggest that interest rates were higher in the wet villages than the dry villages. Borrowers were defaulting on loans due their inability to repay expensive credit in the wet villages. However, it is also plausible to suggest the opposite, that if rice-growing regions were likely to have a more stable season than dry ones, this should reflect in lower price of credit. In Tanjore, for example, cultivators in or near the delta had access to a constant supply of water including in years with failed monsoons. As a result, one would expect loans in wet regions to have been cheaper than loans in dry regions owing to the lower likelihood of crop failure.

[187] *Provincial Banking Enquiry.*

In practice, the evidence shows that neither assumption held true. there was little district-level variation in the price of credit. Lenders provided loans seasonally and charged interest on these loans at monthly intervals.[188] From official village surveys in the 1930s, the price of credit showed little variation between villages. According to the Provincial Banking Enquiry, annualised interest rates varied between 12 and 24 per cent, but this variation existed across most districts. Indeed, the report suggests that interest rates varied between nine and 24 per cent in villages within the wet Tanjore district and between 12 and 24 per cent in the villages within the dry Bellary district. This is corroborated in district surveys. A survey of the Bellary district noted that rates varied 'from 1 to 2.5 per cent per mensem.'[189] In the Tanjore District Gazetteer, the surveyor reported that interest rates 'never seem to fall below ten and in some cases rises as high as 24 per cent.'[190] According to the District Gazetteer of the Godavari district, a primarily rice growing region, 'the rates of interest on loans are much as the same as usual, 12 to 24 per cent being common.'[191] This does not imply that 24 per cent was the maximum interest charged on loans. Indeed, sources reported on loans with higher interest rates. According to a survey in 1935, 'sowcars (moneylenders) of Kurinjipadi who supplied the villagers with money usually charged 6 pies for a rupee for a month or 37.5 per cent but 9 pies for a rupee for a month or 56.25 per cent was not uncommon.'[192] Lenders charged higher interest rates for loans in kind or those secured by crop sharing arrangements. According to the Banking Enquiry, interest rates on crop sharing loans averaged between 25 and 50 per cent per annum.[193] The Bellary District Gazetteer noted that creditors provided grain advances at rates of 25 per cent.[194] However, as shown in Table 2.6, there is no evidence to suggest that the range of interest rates differed greatly by geographical region.

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188 Strickland, "Cooperation"; Roy, "The Monsoon".

189 *District Gazetteers: Bellary,* 101.

190 *Madras District Gazetteers: Tanjore Vol. I,* (Madras, 1915), 112. Hereafter, source referred to as *District Gazetteers: Tanjore*.

191 *Madras District Gazetteers: Godavari Vol. I*, (Madras, 1915), 91. Hereafter, source referred to as *District Gazetteers: Godavari*.

192 Naidu and Vaidyanathan, *Madras Agriculturists Relief Act: A Study*, (Madras, 1939), 3.

193 *Provincial Banking Enquiry,* 221.

194 *District Gazetteers: Bellary*, 101.

Table 2.6 Interest rates (annualised), 1929

District Type	*Agriculturist*	*Professional*
Mostly Wet	9-36	12-50
Mostly Dry	7.5-40	9-49.5
Tanjore	9-24	24-36
East Godavari	12-18	18-26
Bellary	12-24	12-24
Cuddapah	9-18	n

Source: *Provincial Banking Enquiry,* 221.
Notes: The Banking Enquiry Committee arrived at these figures based on a survey of select villages in each district. The table shows the range of interest rates recorded. The interest rates are annualised but moneylenders typically provided working capital loans for a short period of four to six months. Borrowers commonly paid interest bills in monthly instalments. The distinction between Mostly Wet and Mostly Dry conducted in the same format as Table 2.3. Data unavailable for professional moneylenders in Cuddapah.

In other words, the evidence shows that the range of interest rates in wet districts was similar to the range of interest rates in dry districts. Moreover, it does not seem likely that interest rates on loans in wet districts were more likely to congregate at the lower end of the range. According to the Tanjore district surveyor, interest rates varied, 'by the security offered and the amount borrowed.'[195] Enforcement costs and the nature of collateral led to wide variations in credit pricing at the level of the individual loan transaction. This is discussed in greater detail in the next chapter.

In short, this section shows that cultivators dominated credit supply and the market operated seasonally. Agricultural fundamentals affected the borrower's ability to repay and the lender's disposable income to lend. Default rates were higher in the wet regions than the dry and this problem was not driven by lending composition or interest rate variations. The next section shows that lending strategies explain the regional differences in default rates and credit constraints. Creditors adopted safer lending strategies in dry districts and more risky strategies in wet districts. As a result, default rates were subdued in the dry but high in the wet areas.

[195] *District Gazetteers: Tanjore*, 112.

2.4 Geography and Selective Lending

Climate volatility and the design of water management meant that crop failure was also typical of wet districts. Areas near the coast were prone to significant seasonal and annual volatility in rainfall. Though reporting high average rainfall, rice regions were vulnerable to lower than required rains as well as waterlogging in years with a strong northeast monsoon. From annual rainfall patterns reported in meteorological stations across the province, Map 2.4 illustrates the rainfall range, arrived at by estimating the difference between maximum and minimum annual rainfall in a 60-year period.[196] As illustrated, meteorological stations around the coast reported significantly higher rainfall volatility than stations in the hinterland. The Shiyali municipality in Tanjore reported a maximum rainfall of 103.26 inches in 1913 and a minimum rainfall of 24.43 inches in 1892. In its maximum year, the annual rainfall in Shiyali exceeded its 60-year average by 43.58 inches, double the amount of annual rainfall in the minimum year. In contrast, the Adoni municipality in the dry Bellary district reported a maximum rainfall of 53.31 inches in 1916 and a minimum annual rainfall of 11.25 inches in 1876. Using range as an estimate of unpredictability, rainfall in the Shiyali municipality was 47 per cent more volatile than rainfall in the Adoni municipality.

Variations in geographical features within the Tanjore district suggests that crop failure was a problem on the coast and in the regions marginally inland from the deltas. The Cauvery River ran from the Coorg province in western Madras, now the Karnataka state, down to Ramnad and Tanjore in eastern Madras, now the Tamil Nadu state. The river drained in the Tanjore delta where it met the Bay of Bengal. The river had 8 tributaries, the eastern of which was the Coleroon River which flowed out of the intersection between the Tanjore Delta and the coast. Waterlogging and salinity were problems in the delta region. The eastern delta had, on average, a 30 per cent higher annual rainfall than the rest of the basin.[197] Poor soil drainage meant that higher than average rainfall led to flooding and crop failure. In 1918, Harrison, an agricultural chemist reported to the provincial government that 'certain portions of the Delta (Tanjore) are badly drained and are tending to become saline.'[198] In the same period, the District Gazetteer reported that, 'in almost every year there have been breaches in the river banks, and losses of crops of a more or less serious

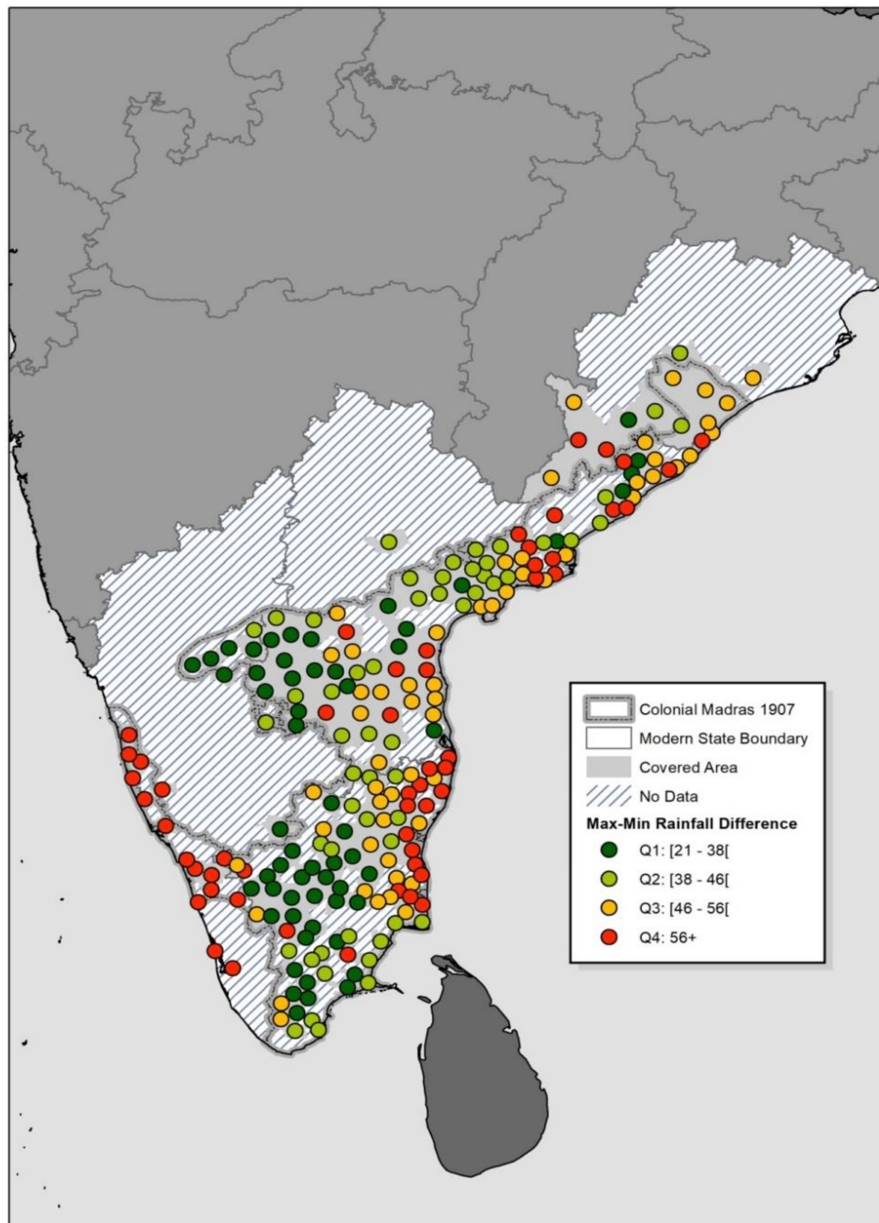
[196] The period runs from 1870 to 1930. However, this is contingent on the meteorological station remaining in operation during that period. The time period shortens in cases where the government set up the station later than others.

[197] S Vedula, "Optimal Irrigation Planning in River Basin Development: The Case of the Upper Cauvery River Basin." *Sadhana* 8, no. 2 (1985), 225.

[198] *A Soil Survey of the Tanjore Delta Vol. III,* (Madras, 1921).

nature.'[199] In one such example, excess rainfall from the northeast monsoon in the winter of 1900 led to flooding and damaged rice crops across the Shiyali municipality, located in the Tanjore district.[200]

Map 2.4 Annual rainfall range (inches) in 208 municipalities, 1870-1930



Source: *Statistical Atlas.*
Notes: The source provides the maximum and minimum volume of annual rainfall from the start of the meteorological station to 1930. The method of data matching, and the errors it produced, are similar to Map 2.2.

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[199] *District Gazetteers: Tanjore,* 153.

[200] *District Gazetteers: Tanjore,* 153.

Water management projects did not solve the problem. The colonial and the post-colonial government considered large hydraulic projects such as canals and dams as solutions to the flooding problem. The building of the Cauvery-Mettur Dam in the 1930s was an example of this in the colonial period. The government commissioned the construction of the reservoir upstream of the Tanjore delta. However, the dam overflowed in years with excess rainfall, leading to flooding and subsidence in the downstream Tanjore delta.[201] The outcome of the Mettur Dam construction in 1930s was a continued reliance on unstable rainfall in the downstream Tanjore deltas.

The unpredictable pattern of rainfall led to large volatility in rice output during the period. The late 1940s and early 1950s are a good example of the large annual variation in output. A good year in 1953 to 1954 followed a string of volatile rainfall between 1949 and 1953. Much of the variation in total crop production was driven by annual changes in rice output. Low yields in the late 1940s prompted the provincial government to commission 'soil and irrigation research' to understand the causes of 'alkalinity, salinity or other defects or deficiencies' in rice producing areas.[202] The good year in 1953 to 1954 saw an increase of 1.7 million tons of food production from the previous year. According to a government report, rice contributed to 76 per cent of this increase. Further explaining the increase in food production in the mid-1950s, the report claimed that 'seasonal factors' explain 50 per cent of the annual changes.[203] Major and minor irrigation accounted for nine and 11.5 per cent respectively, while fertilizer and manures drove 14.7 per cent of the output increase.[204] This substantiates the persistent importance of stable rainfall in crop production. Crop failure was likely in high water-demand areas with volatile rainfall. Dams had a limited impact on this outcome.

Crop durability differed by region, offering borrowers different capacities for loan repayments in wet and dry districts. Rice cultivation, though more valuable, had a higher water requirement than dry crops. According to a government survey in 1960, 'conditions for growing rice are normally more exacting chiefly on account of the greater water and manpower requirements'.[205] In contrast, Hazareesingh describes cotton and millets as 'rain-prudent crops, growing under varied conditions of rainfall and sustained by the deep moisture-holding capacity of black soil.'[206] The versatility of the millet crop allowed peasants the flexibility to grow both cotton and cereal

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[201] S Vedula, "Optimal Irrigation Planning", 225.

[202] *Agriculture and Fisheries in the Madras State*, (Madras, 1954), 8.

[203] *Techno-Economic Survey,* 80.

[204] *Techno-Economic Survey*, 80.

[205] *Techno-Economic Survey*, 77.

[206] Sandip Hazareesingh, "Cotton, Climate and Colonialism in Dharwar, Western India, 1840–1880." *Journal of Historical Geography* 38, no. 1 (2012), 9.

crops year-round.[207] Though richer, Tanjore reported a lower amount of double-cropping than the less developed, drier South Arcot, Salem and Coimbatore.[208] Areas in-land from the delta benefitted from crop rotations. Cultivators in the drier Tanjore municipalities grew millets and groundnuts in years with limited rainfall and rice varieties with comparatively lower water requirements and finger millets in good years.[209] One crop acted as insurance for the other in the dry areas. Indeed, according to Washbrook, cultivators in dry areas commonly grew 'as many as five different crops on the same land in the hope that should some fail, the others at least might survive.'[210] From a survey of villages in the dry Kistna district, the Provincial Banking Enquiry finds that cultivators growing 'five crops together on one bit of land' was common.[211] Creditors in these regions were in a position to recover loans even if one crop failed.[212] On the disadvantages of single-cropping, the Banking Enquiry observed, 'the *ryot* may borrow from two places from the same crop and pay neither.'[213] Single-cropping cultivators in rice-producing regions, therefore, had less of an insurance on droughts and waterlogging than double-cropping cultivators in dry districts.

Additionally, credit requirements were low in the dry districts and high in the wet districts. The Provincial Banking Enquiry estimates that the average debt per acre across the province was 58 rupees in 1930. Surveys of cultivation costs suggest that 58 rupees is a reliable figure of the average working capital required per acre in a single rice-growing season. The average cost of cultivation per acre varied between 45.99 and 85.14 rupees in 1930 prices. Approximately 70 per cent of the 23 observations in Tables 2.7 and 2.8 shows that the average cost of rice cultivation was between 48 and 68 rupees per acre. As such, the Provincial Banking Enquiry's estimate of 58 rupees is a strong proxy of the average borrowed per acre in the deltas. The cultivation of millets and cotton in the dry districts yielded a lower set of expenses per acre than 58 rupees. According to Rao and Rajasekhar, sorghum and cotton cultivation in Bellary cost the cultivator, on average, nine and 12 rupees per acre respectively.[214] These were between a quarter and a fifth of the expenses incurred by rice cultivators in Tanjore. This does not take into account the credit borrowed to finance

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207 Hazareesingh, "Cotton, Climate and Colonialism", suggests that cotton tended to mature later than millets in the nineteenth century.

208 *Techno-Economic Survey*, 94-95.

209 *District Gazetteers: Tanjore,* 100.

210 Washbrook, "Country Politics", 479.

211 *Provincial Banking Enquiry,* 14.

212 This practice was more plausible in black soil areas. Areas with red clay soil allowed for little flexibility in crop cultivation. Here, the cultivator was dependent on growing millets all year round.

213 *Provincial Banking Enquiry*, 220.

214 Rao and Rajasekhar, "Commodity Production", 17.

termly capital requirements or land purchases. Costs of cattle and ploughs were expectedly higher. As a point of comparison, a pair of cattle used for ploughing in cotton fields in the Bellary district cost between 200 and 400 rupees while the cost of a pair of untamed bulls was approximately 100 to 120 rupees in the 'southern districts' in 1939.[215] The government estimated the all-India average annual cost of living at 230 rupees in 1945, approximately 177 rupees in 1930 prices.[216]

The size of borrowing increased with the size of landholding. Yet, borrowing did not increase linearly relative to size of landownership. In other words, there was a declining marginal increase in additional borrowing with each additional acre owned. According to a survey of 564 families in 1935, debt per capita among large landowners was over four times higher than debt per capita among smallholders. However, the debt per acre accrued by large landowners was 38 per cent lower than the debt per acre accumulated among smallholders.[217] The Provincial Banking Enquiry's estimate of 58 rupees per acre exceeded the average borrowed by tenants in richer deltas and smallholders in the dry interior. However, the figure is lower than the average borrowed by smallholders in the rich deltas and large landholders in the hinterland. Farm labourers borrowed less than the average smallholder. According to one report in 1935, one moneylender provided loans of 25 rupees, half the recorded debt per acre, to farm labourers or *coolies*.[218]

Table 2.7 Cost of rice cultivation per acre, 1926 (in 1930 prices)

Plots	*Minimum (rupees)*	*Maximum (rupees)*	*Average (rupees)*
9	45.99	55.47	50.93

Source: *Provincial Banking* Enquiry, 168; McAlpin, "Price Movements".
Notes: Data collected by the Lalgudi Sivagnanam Co-operative Agricultural Society between 1925 and 1926. The cooperative examined the expenses per acre incurred by nine small landholdings during two cultivation cycles. The table shows the data from the costs estimated in the first crop. Costs in the second crop show similar figures. Minimum indicates the landholding with the lowest reported expenses. Maximum shows the landholding with the largest. Average is the mean of all 9 observations. The author adjusts costs to 1930 prices, using McAlpin's price index, for easier comparison with Table 2.8.

[215] Washbrook, "The Commercialisation of Agriculture", 138; *Report of the Economist for Enquiry into Rural Indebtedness*, (Madras, 1946), 47. The cost of cattle was higher in 1939, relative to the early 1930s, owing to upward swing in prices post-Depression. The difference in cost also reflected variation in the quality of the cattle. The same is true of the cost of living index in the 1940s. Prices of commodities soared during the early 1940s.

[216] *Report of the Economist*, 47; McAlpin, "Price Movements".

[217] *Report on Agricultural Indebtedness,* 42.

[218] *Report on Agricultural Indebtedness*, 16.

Table 2.8 Cost of cultivating rice per acre, 1939 and 1947 (in 1930 prices)

District	*1939 (rupees)*	*1947 (rupees)*
East Godavari	62.16	57.21
Nellore	62.16	42.29
South Arcot	85.14	77.61
Tanjore	51.35	55.22

Source: *Indian Agricultural Statistics*, (Delhi, 1950), 174; McAlpin, "Price Movements".
Notes: Table refers to irrigated land and excludes data for unirrigated rice cultivation. The source contains incomplete information on unirrigated paddy areas. Rice requires a minimum level of irrigation to be cultivated thus eliminating any possibility for bias in the data. The author adjusts the costs presented in the source to 1930 prices using McAlpin's price index. Commodity price inflation was high in the 1940s which would show bias in the data if unadjusted.

The average size of landholding was larger in dry districts. The average landholding in seven municipalities in the dry Anantapur, Bellary and Kurnool districts was 12.12 acres in 1930. In contrast, the average size of landholding in five municipalities in the East Godavari, Ganjam, Ramnad and Tanjore districts was 3.7 acres.[219] The average landholding size in the Adoni municipality in Bellary was 10.79 acres in comparison to an average size of 4.88 acres in the Shiyali municipality in Tanjore.[220] In Bellary, tenancy was rare while labourers were commonly temporary workers that worked seasonally and emigrated in bad years. Indeed, the 1951 Census recorded large movements of labour from famine prone areas to rice deltas in bad years.[221] In contrast, tenancy was common and permanent in Tanjore. The delta reported a large number of tenants and cultivating owners while also reporting a low number of temporary labourers.[222] Tenants accessed the credit market, at times borrowing from landlords on sharecropping arrangements.[223] Labour was more permanent, creating a more conducive structure for investment.

Cultivators in dry districts, through higher average landholdings, exploited more risk-bearing economies of scale than cultivators in wet districts. The lack of improvements in technology, including irrigation, seeds and fertilizer, meant that scale provided average landholders insurance

[219] *Statistical Atlas.*

[220] *Statistical Atlas.*

[221] *Census of India,* 14-22.

[222] *Census of India,* 14-22.

[223] *District Gazetteers: Tanjore,* 108-111; Baker, *An Indian Rural Economy*, suggests that sharecropping was a common feature of the Tanjore delta in the colonial and early post-colonial period.

against environmental fluctuations. In 1929, the average landholder in the Adoni municipality in Bellary earned just over half the revenue of the average landholder in the Shiyali municipality in Tanjore.[224] However, landholders in Bellary borrowed significantly less than landholders in Tanjore. As noted, the costs of cultivation were low in Bellary. From a survey of select villages in each district, the average debt per acre in Bellary was 17 rupees in 1929 and 21 rupees in 1935. In contrast, the average debt per acre in Tanjore was 116 rupees in 1929 and 86 rupees in 1935.[225] The number of mortgage registrations, at the district level, show similar results. The value of mortgages per cropped acre was three times higher in Tanjore when compared to Bellary.[226] In other words, average landholders in Bellary were more likely to repay loans than average holders in Tanjore, as they benefitted from scale. Lower risk-bearing economies of scale in Tanjore led to higher default rates in comparison to dry regions.

Table 2.9 Annual revenue per average landholder, 1929

Municipality	*Land Size (acres)*	*Crop*	*Annual yield (tons per acre)*	*Output (tons)*	*Price (rupees per ton)*	*Annual Revenue (rupees)*
Adoni	10.79	Sorghum	0.25	2.7	75	203
Shiyali	4.88	Rice	0.48	2.3	171	393

Source: *Provincial Banking Enquiry* 9-12; *Statistical Atlas; Agricultural Statistics of India.*
Notes: The author choses one municipality in Bellary (Adoni) and one in Tanjore (Shiyali). Average land size taken from the *Statistical Atlas*. Yields are for 1937 and taken from the *Agricultural Statistics of India*. This should not bias the results for 1930 as yields remained stagnant throughout the period. Output calculated by multiplying yields with land size. Price of each crop obtained from the *Provincial Banking Enquiry*. Surveyors in the Banking Enquiry Committee analysed prices from 2 markets in each district across the province in the year 1928-1929. Agriculture in that year was not exposed to unpredictable price shocks and therefore reflects an average price from a successful harvest. The source provides prices per maund. The author scales up prices to per ton estimates for easier analysis. Annual Revenue calculated by multiplying prices with output. The table assumes that cultivators did not diversify cropping patterns.

[224] This analysis assumes that the cultivator in Bellary did not crop-diversify. As discussed, cultivators in dry regions diversified more than cultivators in wet regions. This diversification could increase the annual revenue earned by the average landholder in Bellary.

[225] The Provincial Banking Enquiry Committee Report and Report on Agricultural Indebtedness arrived at these figures by dividing the total lending by number of acres in each village surveyed.

[226] Calculations made by the author. Mortgage loans taken from *Report on the Administration of the Registration Department*, (Madras, 1929); Number of cropped acres taken from *Statistical Atlas.*

Table 2.10 Borrower characteristics in 141 villages, 1935

Village Type	*Lending per Village (rupees)*	*Borrowers per Household*	*Borrowers per Lender*	*Debt per Borrower (rupees)*
All Villages	109,339	0.8	27	206
Tanjore	59,595	0.8	96	332
Bellary	39,365	0.4	11	812

Source: *Report on Agricultural Indebtedness.*
Notes: Data taken from a credit survey of 141 villages across the province. Between 1 and 16 villages surveyed in each district. Lending per Village measured by dividing the total value of lending (including all surveyed villages in the district) by the number of villages surveyed. Borrowers per Household measured by dividing the number of borrowers by the total number of households in the villages. Borrowers per Lender measured by dividing the number of borrowers by the number of moneylenders (agriculturist and professional included). Debt per Borrower measured by dividing the total lending by the number of borrowers. Calculations made by the author.

Creditors selectively allocated credit to the large landholders in the dry districts, whereas lending was less risk-averse in the wet districts. As the borrower's default risk reduced inversely to scale of landownership, excluding poor borrowers was one way for lenders to mitigate the risk of lending in the dry districts. Inequality in landownership was higher in the dry districts compared to the wet regions. In Bellary, for example, land was either owned by poor peasants in several scattered holdings under five acres or owned in 20-acre estates and above by large landowners.[227] Lenders excluded smallholders in dry areas because, without the benefit of diversification, these borrowers cultivated single crops on poor quality land.[228] As illustrated in Table 2.10, the credit market was smaller and more concentrated in Bellary, when compared to Tanjore. The volume of money credited in Bellary villages was approximately two-thirds the size of total lending in Tanjore villages. This money also went to fewer households in the former. As shown, 40 per cent of households borrowed in Bellary. In contrast, 80 per cent of households borrowed in Tanjore. Similarly, from those registered in 1930, the number of mortgages per acre in Bellary was three times lower than the same measure in Tanjore.[229] Fewer households borrowed, but the average borrowed per borrower in Bellary was almost three times larger than the average borrowed by the borrower in Tanjore. This shows than the borrowers in Bellary were richer than the borrowers in Tanjore. A survey of credit in the dry Anantapur district provides similar results. From a sample of 741 cultivators in the district, 519 borrowed from moneylenders in 1929. The average borrowing

[227] Washbrook, "The Commercialisation of Agriculture", 132-134.

[228] *Provincial Banking Enquiry,* 15-17.

[229] *Report on the Administration of the Registration Department,* (Madras, 1931); *Statistical Atlas.*

per capita was 639 rupees, just shy of double the average debt per capita in Tanjore. Explaining why this was the case, the surveyor commented that the borrowers, 'were proprietors of whole or part of the land they cultivated and therefore naturally commanded higher credit.'[230] The size of land mitigated the restrictions of poor quality and enabled larger landowners to borrow in the dry regions. Richer peasants in dry areas, with the benefit of crop diversification and insurance against volatility, accessed credit and invested in production.[231] Poor peasants in dry districts, however, did not have access to the credit market, constraining their investment potential. In contrast, lending was more inclusive in the wet districts. The data shows that households across income categories borrowed in Tanjore.

Financial fragmentation, in the lack of money market integration between villages, constrained lending expansion in dry districts. Writing on rural Indian money markets in 1929, L C Jain notes, 'In rural areas the general level of the rates of interest does not show notable fluctuations….It is well known that excess of money in one rural centre in India does not flow, as it should, to an area where it may be in defect.'[232] In other words, cultivators with disposable income in one village did not lend in other villages where money was scarce.

In short, natural risk, caused by climate fluctuations, affected poor peasants more in dry regions compared to poor peasants in wet districts. However, natural risk affected rich peasants in dry districts less than poor peasants in wet districts. In other words, low growth and stagnant inequality, particularly in the dry districts, was a problem. However, climate volatility and poor land quality, was the root of this problem. The constrained money market, with further constraints after bad years, restricted investment potential for poor peasants, especially in the dry districts. This makes the response from government puzzling. As subsequent chapters show, colonial and post-colonial governments constrained the money market further, in an attempt to alleviate poverty by further reducing access to credit for the rural poor.

2.5 Conclusion

Fragmented credit markets give us reason to imagine villages in Madras as self-contained monetary units. External borrowing was limited as commercial and indigenous banks did not lend in the villages. Cultivators with disposable income were the only source of credit. In this context, one

[230] *Provincial Banking Enquiry Vol III,* 1046.

[231] According to the Provincial Banking Enquiry, land sales were also more likely when the size of land was larger in the dry districts.

[232] L C Jain, *Indigenous Banking in India,* (London, 1929), 99.

interpretation of the problem might be that credit monopolies restricted money supply and hiked interest rates. However, this does not explain the problem fully. Indeed, liquidity was constrained and credit relatively scarce because changes in the volume of money in each village was significantly correlated with the profitability of agriculture. The credit market operated seasonally. Supply expanded after good years and declined after bad years. The frequency of bad years simultaneously increased default rates and restrained the money market in villages.

In this context, creditors faced different levels of risk depending on the region in which they were lending. Rice was cultivated in the districts located near fertile river beds. Districts in the drier hinterland offered soil and climate conditions that suited millet and, in some cases, cotton and groundnut cultivation. Smallholders in wet districts were better able to manage climate volatility than smallholders in dry districts. However, scale offered a distinct advantage to the cultivators in dry districts. Costs per acre of cultivation were lower in the dry districts, and reduced inversely to land size. Further, larger landholders were able to insure against climate risk by diversifying and rotating cropping patterns. The chapter shows that large landholders in dry districts were more likely to repay loans than the smallholders in both wet and dry districts.

Creditors mitigated risk by selectively lending in the dry districts. Cultivators across income categories borrowed in the wet districts, however, lenders provided credit only to the richer cultivators in the dry districts. Credit markets in the Bellary district were smaller and more concentrated than credit markets in the Tanjore district. As a result, default rates were higher in the wet districts than in the dry districts. These findings corroborate the credit rationing theories put forward by development economists. Moneylenders in rural Madras managed risk by selectively choosing their clients, rather than by increasing interest rates.

This chapter shows that geography played an important role in the relationship between rural credit and inequality. Contradicting previous studies, this chapter suggests that size of indebtedness, interest rates and default rates are not strong indicators of credit market structure or rural inequality in Madras. The poor had access to credit in the areas with more favourable geographical conditions to cultivate than the poor in the dry areas. Peasants in the dry areas, therefore, had limited potential to invest owing to limited credit access, perpetuating poverty in these areas over time. Investment rates were low in the dry areas and high in the wet areas, resulting in persistent regional inequality. Policies to artificially irrigate the wet areas, and limited policy initiatives to irrigate the dry areas, seem to have exacerbated the problem in the colonial period.

Chapter 3. Contract Enforcement and Credit Pricing in the 1930s

3.1 Introduction

How did moneylenders enforce the repayment of loans in colonial Madras? Informal, private negotiations were one method. Contracts and negotiated instruments were another. Mortgages and promissory notes were two typically used contracts in rural credit markets in Madras. Courts emerged and spread in the nineteenth century while laws enforced at different points in the nineteenth and early-twentieth century regulated the types of contracts used. Land and tax laws, implemented in the early-nineteenth century and amended in the early-twentieth century, regulated the use of mortgage instruments. The laws stipulated the proprietary rights of landowners and tenants. These rights differed depending on the region and type of land tax arrangement. Nineteenth century contract laws regulated the use of promissory notes. The 1872 India Contract Act and 1881 Negotiable Instruments Act included guidelines on the use of promissory notes in credit transactions. Mortgages and promissory notes had one uniting factor: Both contracts were enforced in courts. Economic historians tell us that poorly designed laws and rising court cases made judicial proceedings expensive in colonial India.[233] Economic theory tells us that creditors price the costs of enforcement into interest rates on loan transactions.[234] In doing so, creditors transfer dispute costs to the borrower. This chapter expands on both assessments, demonstrating that creditors in 1930s Madras increased prices when enforcing region-specific contracts in courts.

Contracts, and the costs of enforcing them, played an important role in the decisions made by rural creditors. Writing in 1954, Frank Moore suggests that expensive court proceedings contributed to the high overhead costs borne by private moneylenders in rural India.[235] Indeed, indigenous bankers cited enforcement costs as a sufficient reason to not lend in the Madras countryside but in the Burmese plantations instead. In an interview with the Provincial Banking

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[233] On land laws and mortgages, see Roy and Swamy, *Law and the Economy*. On contract laws and negotiated instruments, see Martin, "Between Informality and Formality".

[234] Bottomley, "Interest Rate Determination"; Besley, "How Do Market Failures Justify Interventions in Rural Credit Markets?".

[235] Frank J, Moore, "Money-Lenders and Co-Operators in India." *Economic Development and Cultural Change* 2, no. 2 (1954): 139-59, 140-141.

Enquiry Committee, one Chettiar banker claimed, 'I know in Southern India cases have taken ten years and sometimes even centuries to be finally decided.'[236] The agriculturist moneylenders were not as deterred by the enforcement cost problem. Creditors had personal relationships with borrowers and could enforce repayments more easily than urban credit businesses. When creditors failed to obtain repayments with informal arbitration, contract laws allowed creditors to enforce repayments through courts while charging the borrower higher interest rates to account for court and legal fees. In this context, the chapter shows that enforcing promissory notes generated a lower set of expenses than enforcing mortgages.

Creditors used contracts depending on the type of client and size of loans. This chapter finds that the relationship between loan size and the cost of enforcing the contract determined whether creditors used mortgages or promissory notes in rural Madras. The size of loans, a combination of the principal and interest, needed to be high enough to satisfy the cost of enforcing contracts in courts. Large loans to rich landowners satisfied court enforcement more easily than small loans to poor peasants. As a result, loans to the poor were, at least on first issue, unsecured and enforced informally. Only when the size of loans compounded, high enough to satisfy the costs of contract enforcement, did creditors attach contracts to loans. On initial default, creditors extended the primary loans with the added protection of a promissory note. On additional default, creditors upgraded the promissory note to a mortgage instrument. Informal enforcement was the cheapest form. Enforcing promissory notes was more expensive while executing land transfers generated the highest costs.

Creditors enforced repayment on loans to the poor through a three-stage 'loan upgrading' process, where each stage generated a higher level of enforcement costs. As illustrated in Table 3.2, when defaults inflated small loans to a size high enough to allow it, creditors upgraded unsecured loans to contracted ones. Lenders transmitted the costs of enforcing these contracts to higher interest rates. Expensive contract enforcement highlights the inverse relationship between transaction costs and equity in rural credit. Indian courts offered expensive judicial protection to moneylenders. Borrowers absorbed these high costs.

[236] Cited in Baker, *An Indian Rural Economy*, 283.

Table 3.1 Loan size and credit instrument

Borrower Category	*Principal Size*	*Credit Instrument*	*Interest Rates*
Rich	High	Mortgage	Low
Poor	Low	Unsecured	High

Table 3.2 Multi-layered enforcement in Madras

Credit Instrument	*Enforcement Type*	*Enforcement Cost*	*Price Increase*
Unsecured	Informal	Low	Stagnant
Promissory Note	Courts	Rising	Mild
Mortgage	Courts	High	High

This study of the relative use of credit contracts is novel. So far, the historiography has focused separately on either the design of land laws or the design of contract laws, and the impact of these on the use of negotiated instruments. Much of this literature considers the impact of weak property rights on the use of mortgages and the vague instruction contract laws gave to traders and judges in Indian courts as a discouraging factor in the use of *Hundis* or indigenous financial instruments. Both types of instrument shared the enforcement problem and rather than study these independently, this chapter introduces the importance of enforcement costs in explaining the type of contract lenders used in credit transactions. Whereas enforcement and mortgages have been studied in some detail, promissory notes are under-researched despite their frequent use in rural credit markets in colonial Madras.

The chapter analyses land laws and contract laws as well as new material from administration reports, judicial reports and credit surveys in the early 1930s. The price crash makes the early 1930s a useful period to study enforcement in rural credit. Enforcement problems were most acute when repayment rates were low. Indeed, default rates were high in the early 1930s. Unable to recover loans informally, creditors provided loan extensions with attached contracts and ultimately relied on courts to enforce repayment. The need for formal enforcement entrenched the multi-layered lending structure during this period. The early 1930s presents an additional benefit of the market being unregulated. As discussed in the next chapter, this distinctive loan and enforcement structure

in Madras explains why credit intervention in the late 1930s failed to have the desired impact.

The chapter is divided into four sections. The first considers the evolution of courts and judicial proceedings in colonial India. The second and third analyse the market for mortgage and contracted credit in late 1920s and early 1930s Madras. The final section provides an analytical framework of the transmission of enforcement costs on the prices of credit in the multi-layered loan format.

3.2 The Evolution of Courts

The East India Company established courts to resolve civil and criminal disputes across provinces in the late-eighteenth and early-nineteenth century. *Panchayats* or local village administrations were forums for civil disputes in the period prior to the expansion of Company rule.[237] Company officials abolished *Panchayats* and replaced them with a centralised court structure in the eighteenth century. The Company organised Royal Courts in 1727 under Royal Charter from the King. Warren Hastings transplanted the court model, establishing a three-tier court structure in the Company-controlled Indian provinces. Hastings was originally a military leader, playing a vital leadership role in the Company's acquisition of Bengal from Mughal rulers. Hastings led forces that accompanied regiments led by Robert Clive and Hector Munro in the famous Battle of Plassey in 1757 and Battle of Buxar in 1764. The Company appointed Hastings the first Governor of the Bengal Presidency, a position that extended to all Company-controlled provinces in the 1770s. In this administrative position, Hastings established district and provincial Company courts in 1772.[238] District courts were the primary forum for rural disputes. Provincial courts heard appeals from district courts. The 'federal' *Sadar Adalat* heard final appeal proceedings under Company Rule.[239] Provincial administrators hired British judges to administer company proceedings in the courts. The Company created two *Sadar Adalats*, separated according to civil and criminal proceedings. Judges in the *Sadar Dewani Adalat* settled civil cases while those in *Sadar Nizamat Adalats* resolved criminal disputes. The Company transplanted this structure to Madras in 1802.

Some company officials in early nineteenth century Madras believed that the replacement of indigenous administrative procedures with colonial legal institutions was not an entirely successful initiative. Spearheading this criticism was Thomas Munro. Munro played an important role in the

[237] *Panchayat* literally translates to 'assembly' and describes a form of village administration where a group of administrators solve disputes and implement local reforms within villages across rural India.

[238] Mootham, *The East India Company's Sadar Courts*, 3-5.

[239] *Sadar Adalat* translates to 'Main Court' and was the top provincial court until 1857.

conquest of Madras. Under Munro's leadership, the company army gained vast territory in the battles against Tipu Sultan and the Nizam of Hyderabad in the late eighteenth century. Following victorious battles, the company promoted Munro to administrative positions. The company ultimately promoted Munro to Governor of Madras in 1819. In this position, Munro attempted to devolve some judicial power to pre-colonial indigenous administrations. The organization of company courts, according to Munro, was 'too great a departure from native institutions to work with success.'[240] As Governor, Munro enforced two policy changes to courts.

The first was changes in rules relating to the selection of judges in *Sadar Adalats*. Provincial governors and members of the provincial council were also judges in *Sadar Adalats* in the late-eighteenth century. In 1807, Company officials altered the composition of court benches to include a chief judge and two puisne judges. The Chief Judge was a member of the governing council while the others were not required to be members of the provincial government. The selection criteria of judges underwent significant changes under Munro's Governorship.[241] Munro recognized the importance of judicial experience in the selection criteria for the appointment of judges. Though the Chief Judge was a legislator, Munro enforced a minimum qualification barrier for puisne judges to ensure *Sadar Adalats* were administered by those that have prior experience in lower provincial courts.[242] The Company selected judges in lower courts from the civil or government service. Despite having judicial experience, these judges were civil servants by training. In 1825, Munro increased the number of puisne judges in the Madras *Sadar Adalats* to three in order to avoid delays in judgements.

The second judicial policy change in the early nineteenth century referred to the official role of the *Panchayat.* During his tenure as Governor of Madras, Munro believed that successful control required the merging of British forms of administration with indigenous Indian institutions.[243] He criticised the abolishment of indigenous forms of justice administration. Munro believed that the introduction of pre-colonial forms of village administration would legitimise Company rule through decentralised power centres. According to his memoirs,

> Munro strongly advocated the revival of the native institution called ' panchayat ' — a court of arbitration composed of five or more persons — and the transfer of the duty of superintending the police from the Judge to the Collector, who, moving frequently about his district, and mixing with the people, had better means of effectively supervising the police than were available to a stationary judicial officer. The union, for similar reasons, of the

240 Arbuthnot, *Major-General Sir Thomas Munro,* 109.

241 Mootham, *The East India Company's Sadar Courts*, 104-107.

242 Mootham, *The East India Company's Sadar Courts*, 104-107.

243 Arbuthnot, *Major-General Sir Thomas Munro,* 109.

offices of Collector and Magistrate, and the utilization of the village officials to deal with petty offences and with petty suits, were also included in his proposals.[244]

Following the transfer of powers to the Crown in 1857, colonial officials attempted further fusions of western and indigenous institutional structures. *Sadar Adalats* were abolished and High Courts were established across provinces. Dual justice structures under the *Sadar Adalat* system were streamlined to single appellate courts. Village *panchayats* were revived through various reforms in the nineteenth and early-twentieth century. The 1871 Mayo Resolution and Lord Rippon's resolution in 1882 legitimised village administrations and devolved local policymaking to *panchayats*. The 1907 Royal Commission increased the power of *panchayats* to deal with petty civil disputes, including credit defaults.[245]

Despite its revival, the official role of the *panchayat* was limited by the end of the colonial rule. By the 1950s, 'the chief work of the panchayat,' was the provision of some public goods through the construction of roads and wells and the administration of civil disputes, including credit defaults that were too small to be considered in courts.[246] Credit defaults were more commonly heard in district courts with the High Court as the main forum of appeal. Rural credit disputes were initiated in small cause courts prior to entering a hierarchy of appellate courts including lower and higher district courts with a final forum of appeal at the provincial high court.[247] Colonial governments supplemented this transition in the court structure with changes in the rules for judge selection. The 1861 High Court Act and the 1935 Government of India Act specified minimum qualification experience for judges to qualify in Indian courts. British barristers qualified as high court judges only with prior judicial experience in colonial India.[248]

Enforcement in rural credit markets followed changes in the structure of courts. By 1850, rural credit disputes were governed by courts rather than customary law and village administration.

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[244] Arbuthnot, *Major-General Sir Thomas Munro,* 109.

[245] The decentralisation of judicial power to Panchayat has prompted some debate on whether its revival marks a continuity or discontinuity of indigenous legal organisation. Galanter, "The Aborted Restoration", argues that the newly revived Panchayat marks a discontinuity in legal traditions as it was governed by a newly formed group of legal agents with a vested interest in maintaining the transition to colonial forms of justice. Abraham, "Colonial Law in Early British Malabar", argues in favour of a discontinuity in legal structures. Abraham emphasises the creation of a court hierarchy, the appointment of court registrars to ensure the functioning of court procedure, appointments of trained attorneys, the issuing of summons and recording case trials. However, Abraham also suggests that this transition was weakened by the recruitment of local judges, magistrates, court officials and staff. Customs of caste and religion influenced the directives issued by judges.

[246] *Rural Credit Survey Vol. II*, 76.

[247] Cases from high courts could appeal to the Privy Council in London, the Federal Court after its inception in 1934 and the Supreme Court post-independence. However, there were stringent conditions on the admittance of disputes in the Privy Council. Cases above a certain value could qualify. Credit disputes rarely qualified for appeal in a court higher than the provincial high court.

[248] Part IX, Chapter 2, Government of India Act 1935.

Contracts substituted social capital as methods of risk mitigation. Lenders reported first time defaulters in civil courts. Kranton and Swamy argue that moneylenders in the Bombay Deccan were less incentivised to show leniency to defaulters following the transition to courts.[249] Writing in 1954, Moore believed that, 'the traditional relationship between creditor and debtor in the Indian village was upset by the introduction of the British legal system. Customary limitations on interest gave way to enforceable contracts legalizing unlimited compounding interest.'[250]

Were contracts easily enforceable in courts? Did they come at a cost to the moneylender? Moneylenders in Madras used different versions of contract. Mortgages functioned separately from loans that were contracted but not secured by immovable property. Subsequent sections in this chapter discuss variations in the design, use and cost of credit contracts.

3.3 The Mortgage Market

Land tax was an important source of revenue for the East India Company and later the British crown-ruled government. The East India Company extended forms of land taxes enforced during Mughal rule. In agreement with rich landlords in Bengal, the Company enforced the Permanent Settlement agreement in 1793. According to the agreement, large estates remained under the ownership of pre-colonial elite households. The Company taxed these households, based on the size of the land owned, and the landlords divided their land into plots and leased these out to multiple tenants. The tenants cultivated the land. The Company extended this tax structure to the Madras Presidency in 1802. However, under Munro's governorship, the company administration made changes to the tax structure in Madras from the 1820s. Munro's government excluded the intermediary and implemented a structure allowing the Company to tax the cultivator directly. The strength of property rights followed the tax structure in colonial India.

By 1900, three structures of tax and ownership operated in the province. First, the *Ryotwari* tenure provided ownership rights to the government. The government fixed land taxes for a period of thirty years and collected this directly from the cultivator.[251] Second, in *Zamindari* settlements, pre-colonial elites retained the proprietorship of landed estates. As proprietors of this land, the owners of landed estates were charged a permanently decided land revenue payment or *peishkash*. The vast tracts of land owned by *zamindars* were divided into individual plots and leased to

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249 The authors argue that the presence of courts increased competition in the credit market but punishments on defaulters were more severe than the preceding period where lenders relied on informal enforcement mechanisms.

250 Moore, "Moneylenders and Co-operators", 142.

251 *Madras State Administration Report,* (Madras, 1947), 87.

cultivators at a privately determined rent. Third, colonial governments granted proprietorship over tracts of land to regional nobility in the *Inam* or *Jagir* structure. *Inamdars* provided military and policing services to the colonial government in return while leasing cultivated land to individual tenants. In determining the strength of property rights, there were two systems of land ownership in colonial India. The government-cultivator structure provided proprietorship to individual cultivators. The government-owner-tenant structure provided proprietorship to non-cultivating landlords.

Land titles were comparatively secure in the government-cultivator structure. The government divided land into fields. Each field varied in size but were commonly between five and ten acres in Madras.[252] Cultivators divided holdings and fields with physical boundaries. Local revenue departments taxed each subdivided holding. The government attached a title document or *patta* to each holding. The *patta* was a quasi-contract, confirming the cultivator's fiscal obligation to the government.[253] Each *patta* specified the name of occupant, size of holding and extent of tax assessment for the occupied landholding.[254] The revenue collectors in the provincial government reviewed *pattas* annually to document changes in landownership. The *pattas* ultimately acted as transferable property titles. Transfers in the ownership of land required revisions in this title to reflect the obligations of the new landholder.[255] While the government *de jure* owned *ryotwari* lands, the *pattas* allowed for an active land market from the mid-nineteenth century. Cultivators *de facto* owned the land they cultivated. Cultivators commonly collateralised *pattas* to obtain credit.

Titles were more complicated in government-owner-tenant settlements. The government issued proprietary rights to landlords. The government attached one condition to this proprietorship, that the landlord met their tax obligation for the entire period of ownership.[256] The government issued similar *pattas*, but to the landlords instead of the cultivators. The *pattas* in the government-owner structure were stronger than those provided to government-cultivators. Government-owner titles confirmed the landowner's proprietorship of the estate whereas government-cultivator titles inferred ownership through identifying the fiscal responsibility of the landholder.[257] The permanent occupiers of *zamindari* land were tenants charged with a rent

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[252] *State Administration Report*, 87-88.

[253] *Report of the Economist*, 7.

[254] *State Administration Report*, 87-88.

[255] Despite its primary function as a tax statement, the patta also served as the confirmation of a landholder's title. Transfers in ownership were reflected in this title.

[256] The pattas issued to zamindars were stronger than ryotwari settlements as they confirmed their proprietary ownership of the estate rather than inferring ownership through the fiscal responsibility of the landholder.

[257] *Report of the Economist*, 7.

determined by the landlord.[258] This structure of owner and quasi-tenant complicated the transferability of land in these settlements.

Zamindars and *inamdars* benefitted from rent rather than cultivation profits. Landlords and tenants privately determined rents in these settlements. The rents were commonly higher than land taxes. Landlords profited from the difference between the rent charged to their tenant and the tax paid to the government.[259] According to one government report,

> the ryots in zamindari tracts are not so well off as those in government taluks. They are generally required to pay their rental in grain which, as a rule, represents half the gross produce of the lands cultivated by them; and the zamindars ordinarily lease out their villages yearly in auction to middle men who have no interest in the welfare of the ryots and try to rack rent them.[260]

As such, landowners were not incentivised to invest in improving land quality. Investment into improvements in production techniques and agricultural infrastructure was low throughout the colonial period.[261] The previous chapter, for instance, records the low levels of private investment in irrigation infrastructure. Despite possessing transferrable titles, landowners in *zamindari* estates rarely mortgaged land or borrowed on the credit market.[262] Tenants in *zamindari* estates were unable to borrow on the credit market. Tenant titles in the late nineteenth and early twentieth century were weaker and less tradable than titles possessed by landowners.[263]

However, the distinct features of land tax in the province partially solved the problem. *Ryotwari* or government-cultivator settlements formed the 'principal tenure of the province.'[264] According to government reports, cultivators owned 90.09 million acres of rural land in 1930. Government-cultivator arrangement accounted for 60.05 million acres while the owner-tenant arrangement existed in 23.6 million acres. An accurate identification of the regional variation in land tenure arrangements is a challenging task. Different tenure arrangements commonly existed within municipalities and occasionally within villages.[265] Indeed, out of 241 recorded municipalities, 40

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[258] Zamindars often leveraged on the income from rent rather than cultivation. Roy and Swamy, *Law and the Economy*, show that zamindars gained their surplus through the difference between the rent charged to the tenant and the tax owed to the colonial state. Land revenue was a fixed annual cost while rent increased over time.

[259] A M Khusro, "Land Reforms since Independence", In V B Singh, *Economic History of India, 1857*-1956, (Bombay, 1965), 181.

[260] *Statistical Atlas*, 40.

[261] Roy and Swamy, *Law and the Economy in Colonial India,* 61.

[262] Roy and Swamy, *Law and the Economy in Colonial India,* 47.

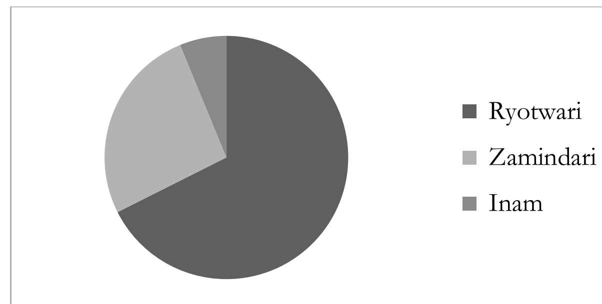
[263] *Report of the Economist,* 7-8.

[264] *State Administration Report*, 87.

[265] This challenges some existing literature that makes broad regional assumptions about regional variation in land tenure structure. Banerjee and Iyer, "History, Institutions and Economic Performance", for example, identify

reported to be aligned with one tenure arrangement. Land ownership in the Berhampur municipality in the Ganjam district highlights the complex nature of this sub-regional variation. In 1930, there were 230 *ryotwari* villages, 57 *imam* villages and 178 *zamindari* villages.[266] However, the evidence shows the dominance of one arrangement over another. Either by acreage or by number of aligned municipalities, data from official reports classified three-quarters of rural land under the government-cultivator tenure arrangement.

Figure 3.1 Acreage by tenure arrangement, 1930



Source: *Statistical Atlas*.
Notes: Data on acreage per municipality aggregated to the provincial level. Data corresponds to the total number of acres owned, sub-classified by the type of land tenure arrangement. Calculations made by the author.

Table 3.3 Land tenure in municipalities, 1930

Total Municipalities	*Entirely Ryotwari*	*Majority Ryotwari*	*Entirely Zamindari*	*Majority Zamindari*
241	32	149	8	52

Source: *Statistical Atlas*.
Notes: Data corresponds to the total number of acres owned, sub-classified by the type of land tenure arrangement within each municipality in the province. The source identifies the number of acres declared as 'owned' while reporting the number under each tax classification. 'Entirely *Ryotwari'* measures the number of municipalities where the ratio of ryotwari land to total land owned was 1. 'Majority *Ryotwari'* measures the number of municipalities where the ratio of ryotwari land to total land owned was above 0.5. The same exercise was constructed for *Zamindari* municipalities. *Zamindari* municipalities include *inam* tenure arrangements. The data includes semi-autonomous Agencies. These were tribal areas in the Vizagapatam district and a collection of *zamindari* owned lands in the Ganjam district. Calculations made by the author.

Provincial laws in the colonial and post-colonial period attempted to address the problem in the remaining one-quarter of land classified under the owner-tenant arrangement. The provincial government enforced laws to strengthen the rights of tenants in *zamindari* settlements. This followed legal cases in the late nineteenth century where landowners questioned the rights of

'landlord' and 'non-landlord' land tenure arrangements by districts. This ignores large variation within municipalities and villages.

[266] *Statistical Atlas*.

tenants to securitize leased land in return for credit. Judges ruled in favour of tenants as they were not 'tenants at will'. Judges believed that the occupation of *zamindari* land provided cultivating tenants with stronger rights than tenants in *ryotwari* areas.[267]

The provincial government supported this view and enforced the Madras Estates Land Act in 1908. The Act provided tradable occupancy rights to tenants in *zamindari* areas.[268] According to Section 6 of the act, occupiers or cultivators in 'possession' of land had the 'permanent right of occupancy in his holding.'[269] In terms of transferability, Section 10 of the Act stated that, 'all rights of occupancy shall be heritable and shall be transferable by sale, gift or otherwise.'[270] G. S. Forbes, a member of the provincial government, proposed the Madras Estates Land Bill in 1905.[271] Forbes believed the Bill would allow tenants to leverage on their occupancy right to borrow and invest on cultivated land.[272] The aim of the legislation was to provide tenants on *zamindari* settlement with the equivalent protection as given to *ryotwari* landholders.[273] The act strengthened tenancy protection by limiting the landowner's ability to exploit tenants through high rents. Sections 26, 27 and 28 of the Madras Estates Bill exercised limitations to short term rent increases. Theoretically, this improved the borrowing capacity of tenants cum cultivators.

The 1908 Act empowered tenants to borrow externally on the credit market. In practice, absentee landlords were also present in *ryotwari* areas. Urban or non-cultivating landowners benefitted from land rents rather than the profitability of cultivation. This perverse incentive restricted productive investment in rural areas. The Madras Estates Act partially eroded this investment barrier as tenants benefitted from rent ceilings and were encouraged to access credit through mortgage instruments.

Tenant protection eventually culminated in a complete detachment from colonial land tenure arrangements post-independence. Nationalists and members of the newly formed Indian government believed that permanent occupiers continued to be exploited by rent-seeking *zamindars*

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[267] Roy and Swamy, *Law and the Economy in Colonial India,* 46-47.

[268] The Madras Estates Land Act also strengthened tenancy protection by restricting the *zamindar's* ability to exploit tenants through high rents. Sections 26, 27 and 28 enforce restrictions on short term rent increases.

[269] Section 6, Madras Estates Land Act 1908.

[270] Section 10, Madras Estates Land Act 1908.

[271] George Stuart Forbes graduated from Aberdeen University and joined the Indian Civil Service in 1871. Forbes held positions in the Madras administration including Secretary to the British Resident in Hyderabad, Secretary to Berar and Chief Secretary to the Governor of Madras. Between 1906 and 1909, Forbes served on the Madras Legislative Council.

[272] *Proceedings of the Council of the Governor of Fort St. George*, (Madras, 1905).

[273] Roy and Swamy, *Law and the Economy in Colonial India,* 62.

despite changes in tenant laws at the turn of the century.[274] The provincial government in Madras implemented land reforms that replaced the colonial Permanent Settlement structure. The majority of provincial governments across India implemented similar laws during the decade following 1947.

The 1948 Madras Estates Act abolished the government-owner-tenant land ownership structure. The provincial government took temporary ownership of the settlements under this category. Local departments then redistributed the ownership of sub-holdings to permanent occupiers.[275] *Zamindars* were entitled to ownership of the land they cultivated. The government provided tenants ownership if they were permanent cultivators.[276] The government hoped that this redistributive legislation would abolish the exploitation of cultivating tenants and reward permanently settled agriculturists. The government provided new landholders with stronger land titles. Section 12 of the Madras Estates Act stipulated that, 'in the case of zamindari estate, the landholder shall with effect on and from notified date be entitled to a ryotwari patta.'[277] The provincial government converted the opaque ownership structure of *zamindari* settlements into more cemented property titles, as previously existed in government-cultivator settlements. This then provided a greater clarity of ownership and hence theoretically increased the negotiability of titles to obtain credit.

The result of the government-cultivator tenure structure and the reversal of eighteenth-century land laws was that property titles were not much of a barrier to mortgage lending in rural Madras. Even in the early twentieth century, during the colonial period, the number of disputed land transfers due to the strength of titles was low. Courts typically ratified land transfers. Judges amended titles and new owners registered titles in government registration offices. When titles were weak or unenforceable, judges rejected the sales or mortgages of land. This practice was rare in Madras, suggesting that titles were not a barrier to land transfers. In 1928, for example, court judges reversed 70 land purchases for invalid land titles. The government reported over one million

[274] Khusro, "Land Reforms since Independence", 181.

[275] The impact of this reform has inspired debate on inequality post-independence. For example, Chattopadhyay, Suhas, "On the Class Nature of Land Reforms in India since Independence." *Social Scientist* 2, no. 4 (1973): 3-24, highlights the persistence in rural inequality as the share of land owned by smallholder cultivators did not increase after 1948. Chattopadhyay expands and suggests that *zamindars* retained absentee landholdings through *benami* ownership. *Benami*, in this context, refers to a version of fraud where *zamindars* retained the ownership of land after land reform laws by registering titles under the ownership of their relatives or close friends. The widespread practice of this fraud, according to Chattopadhyay, restricted the impact of land reforms on wealth redistribution.

[276] Chattopadhyay, "On the Class Nature of Land Reforms in India since Independence", 3-5.

[277] Section 12, Madras Estates (Abolition and Conversion to Ryotwari) Act 1948.

mortgage and sale transactions in the same year.[278] If not titles, then did the value of land discourage mortgage lending?

There were two other barriers to mortgage lending in Madras.[279] First, as discussed in the previous chapter, the quality of land encouraged or deterred mortgages and sales. Non-irrigated and low-quality soil reduced the value and tradability of land. Second, creditors were discouraged from mortgage lending as they were afraid of inheriting unpaid tax obligations with the possession of new property. Indeed, cultivators defaulting on mortgages also defaulted on taxes. If not mortgaged, revenue officers in municipality governments auctioned land with unpaid taxes attached. The tax inheritance either deterred sales or significantly reduced the auction-price of these lands. According to the Madras Estates Land Act Committee's report, 'for an arrear of one rupee, land worth Rs. 100 is brought to auction and taken for a very low price.'[280] According to an account by the Deputy Registrar of the Bellary district in 1929, the sale price of red soil land in government auctions was between five and 25 rupees. This was between a half and a quarter of the sale price in private negotiations.[281] Both barriers affected some regions more than others. Poor peasants in dry regions were most affected by bad quality land and tax defaults. According to Washbrook, labourers and tenants in Bellary were discouraged from owning land as, 'independent farm production brought only tax-bills.'[282]

As demonstrated in Figure 3.2, annual or short-term shifts in the supply of mortgage loans in the early twentieth century responded to shifts in commodity prices. As annual growth in yields was low, the size and value of the harvest determined the prosperity of the cultivator. The cultivator's revenue can be measured as crop output multiplied by the trade price of the crop. Annual increase in output or prices increased the cultivator's revenue. Two factors explain why creditors were more likely to provide mortgage loans in years with commodity price increases. First, borrowers saw increases in revenue and were more likely to repay loans. Second, increase in

[278] *Report on the Administration of the Registration Department 1929*, 5.

[279] There is a third barrier which is not discussed in the main text: Land fragmentation. Misshapen plots or multiple and disconnected plots in a single holding were potential barriers to mortgage lending. Official reports suggest, however, that this problem was uncommon in Madras. On land fragmentation, the *Provincial Banking Enquiry* reports, 'These conditions, however, do not seem to prevail to any great extent in this Presidency. Holdings undoubtedly are fragmented and there is nothing uncommon about a *ryot* having half a dozen different plots but it is not the rule and though it is common for the *ryot* to have three plots it is uncommon to have many more.' The report proceeds to suggest that land sales consolidated landholdings in the nineteenth and early twentieth century. According to the report, the rich reported fragmentation, but this was because they owned multiple and cultivable plots of land in different parts of the village. See *Provincial Banking Enquiry,* 18-19.

[280] *Madras Estates Land Act Committee Report: Part I*, (Madras, 1939),187. Hereafter source referred to as *MELAC Report*.

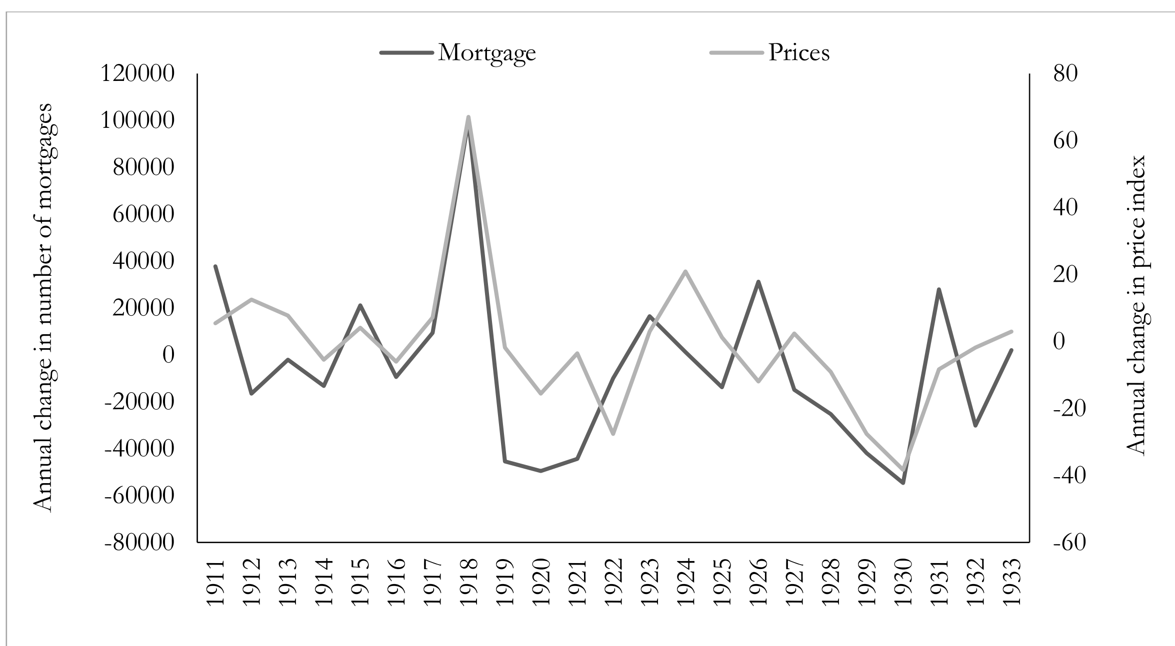
[281] *Provincial Banking Enquiry Vol III,* 1014.

[282] Washbrook, "The Commercialisation of Agriculture", 137.

the value of commodities meant an increase in the value of land. This incentivised creditors to provide new mortgage loans or upgrade previously unsecured loans to mortgages.

Figure 3.2 demonstrates that the difference in mortgages between year *n* and year *n-1* corresponded to the difference in prices in the same years. The chapter suggests that the swift response of supply to price shocks was driven by the short-term structure of the credit market. As loans were provided seasonally, lenders withheld or increased credit supply in response to yearly shifts in prices. Expectations of price changes from shocks such as droughts were reflected in credit supply.

Figure 3.2 Annual shifts in mortgage loans and commodity prices, 1911-1933



Source: *Report on the Administration of the Registration Department 1911-1933*; McAlpin, "Price Movements".
Notes: The graph measures annual changes in the number of mortgage loans and McAlpin's commodity price index. The author collected data on the annual number of mortgages in each district and aggregated this to the provincial level. The author calculates annual changes by taking the difference between the number of mortgage loans in year *n* and the number of mortgage loans in year *n-1*. The same method is applied to calculating changes in the commodity price index. Base year for mortgages and prices is 1911. The first point in the graph is the difference in mortgages and prices between 1911 and 1912. The graph stops at 1933 as recovery from the Depression began in 1934. The government installed a series of credit regulations from 1935 which affected the mortgage market. These factors are discussed in the next chapter.

Annual movements in prices and mortgage supply saw large upward and downward shifts after the First World War and during the Great Depression. The inflationary trend after the war led to a short-term increase in the number of mortgages. The value of land increased in 1918 owing to higher demand. The increase in land transfers after the First World War occurred because of a

'revival in trade' and 'investment in land of the savings of a large number of demobilised men.'[283] In contrast, deflationary pressures during the global Depression drove down the number of mortgages in the province. Commodity prices declined by 20 per cent between 1929 and 1930, and 31 per cent between 1930 and 1931. The number of mortgage loans declined by 8 per cent and 12 per cent in the same years. The number of mortgage loans in 1933 was 27 per cent lower than the number provided in 1927. The provincial government corroborated this trend. According to one official report,

> Prices of the staple products in the various districts have considerably fallen and consequently the value of the land on the whole has very much decreased, the result being that creditors are not able to realize their moneys nor have they the courage to advance fresh loans and the debtors are not able to find purchasers of their properties to clear off their debts.[284]

Moneylenders provided three types of mortgage instruments during the late colonial period. First, lenders provided credit secured by mortgage without possession. Agents contracted the transfer of land but did not execute the transfer until the borrower defaulted. Borrowers continued to cultivate the land until they defaulted. Second, lenders provided usufructuary mortgages or loans secured by mortgage with possession. Borrowers transferred the ownership of land to lenders prior to loan issue. Lenders took responsibility for cultivating the land until borrowers repaid. Third, borrowers provided lenders with a bond or promise of land transfer in the event of default. Mortgage without possession was the most common instrument used during the period. Lenders rarely provided loans with the obligation of prior possession or bond. From a government survey of 54 villages in 1935, the number of loans secured by mortgage without possession was 2.5 times higher than the number of loans secured by both possession and bonds.[285]

Lenders commonly provided mortgages as secondary rather than primary loans. As shown in Figure 3.3, the purposes of borrowing in the mortgage loan market had some similarities to the already identified features of the rural credit market. Evidence shows that cultivators borrowed more production than consumption credit. The value of loans for cultivation and trade were higher than the value of loans for marriage. However, the data in Figure 3.3 excludes the loans provided for the repayment of prior debts. As illustrated in Figure 3.4, cultivators primarily borrowed in the

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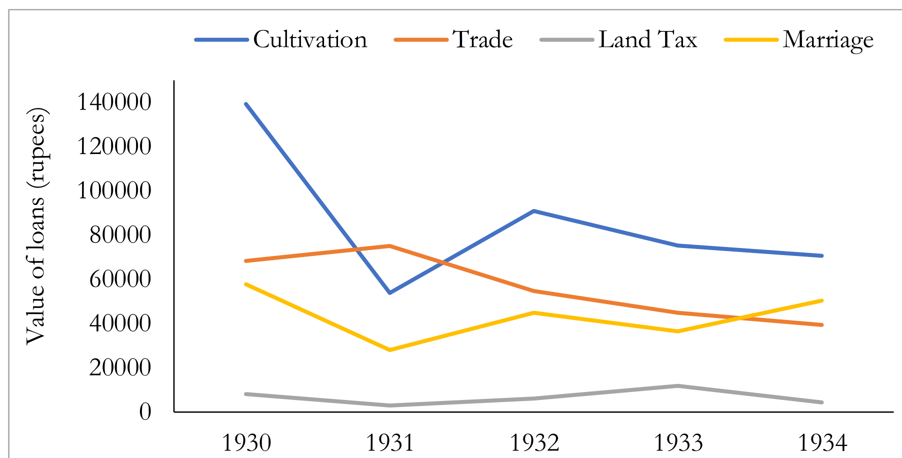
[283] *Report on the Administration of the Registration Department 1920*, 4.

[284] *Report on the Administration of the Registration Department 1931*, 4.

[285] *Report on Agricultural Indebtedness*, 35. Mortgage bonds were more common in loans provided for trade rather than cultivation. This reflects the difference in the risk of lending. Bonds were less secure than other mortgage instruments. Cultivation was more unpredictable than trade.

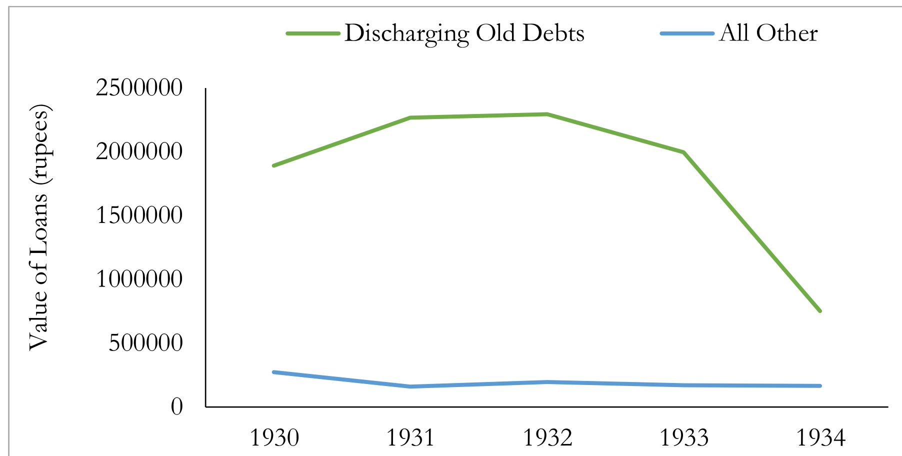
1930s to repay previously undertaken debt. One factor driving this outcome was that deflationary pressures during the Depression increased default rates. Creditors provided loan extensions and defaulters re-borrowed on the market to repay previous loans. Another explanation is that secondary borrowing was a structural feature of the mortgage market. Lenders were more likely to use mortgage instruments following initial defaults. Lenders demanded the transfer of land when granting extensions to defaulters. A subsequent section in this chapter demonstrates that this feature of the mortgage market is explained by the cost of enforcement.

Figure 3.3 Nominal value of mortgage loans by purpose of borrowing, 1930-1934



Source: *Report on Agricultural Indebtedness*, 35.
Notes: Government commissioned surveyors collected data on mortgage loans in two villages per district, across 27 districts in the province. The figure excludes data where the source reported the purpose of borrowing as either 'other' or unidentifiable. 'Cultivation' includes borrowing to finance production. 'Trade' includes borrowing to finance the transport of produce after the harvest. 'Land Tax' includes borrowing to specifically pay unpaid tax bills. 'Marriage' includes borrowing to finance a marriage ceremony. The graph excludes data on borrowings for the repayments of prior debts.

Figure 3.4 Nominal value of mortgage loans issued to discharge old debts, 1930-1934



Source: *Report on Agricultural Indebtedness*, 35.
Notes: Data scope and source similar to Figure 3.3. 'Discharging Old Debts' includes borrowing to repay previous loans. 'All Other' includes borrowing to finance cultivation, trade, land taxes and marriages. The graph excludes data where the source reported the purpose of borrowing as either 'other' or unidentifiable.

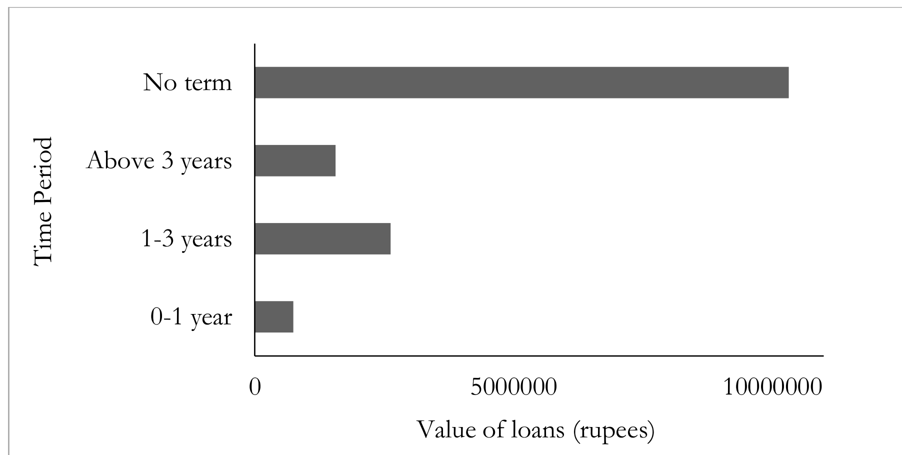
The Depression had a significant impact on the mortgage market. The supply of credit contracted, across borrowing categories, between 1930 and 1934. In this context, the rate of decline in cultivation credit was higher than the rate of decline in marriage credit. In other words, the supply of investment credit was more inelastic, in response to price shocks, than the supply of consumption credit. More importantly, the value of loans borrowed to repay previous debts overshadowed other measures by a significant margin. The value of defaulted loans increased at the start of the Depression but decreased from 1932. The value of loans for purposes other than the discharge of previous debts did not see a similar decline after 1932, implying that the reduction in defaults was not driven by a contraction in total supply.

The high ratio of secondary to primary borrowing in the mortgage market was not entirely a Depression driven phenomenon. Indeed, at the onset of the Depression in 1930, the value of borrowing to repay prior debts was 14 times higher than the value of borrowing to finance cultivation expenses. In 1934, despite increasing prices and the beginning of the recovery from the crisis, the value of secondary borrowing was still 11 times higher than the value of productive borrowing. In other words, borrowers on the mortgage market were commonly defaulters. Lenders provided mortgage loans as secondary loans to defaulters and not working capital loans to first time borrowers.

Data on the average loan terms, from when the loan is issued to when the contract expires or matures, of mortgage loans shows that the primary purpose of borrowing on the mortgage market was the repayment of defaulted loans. Lenders provided long-term loans of between one and three years to high-income borrowers for the purchase of land or large capital expenses. Yet, these loans

constituted the minority of total mortgage lending in rural Madras. 'No term' was specified on the majority of recorded mortgage loans between 1930 and 1934. Lenders deliberately avoided declaring specific time periods as a means of increasing their flexibility. As mortgages were secondary loans, lenders leveraged on undeclared loan terms to enforce land transfers with short notice periods given to borrowers.

Figure 3.5 Value of mortgage loans by time period, 1930-1934



Source: *Report on Agricultural Indebtedness*, 36.
Notes: Government officials collected data on the time span (in years) of mortgage loans in two villages per district, across 27 districts. The source categorised data by the annual number of mortgages without possession, mortgages with possession and mortgage bonds between 1930 and 1934. Each category shows the volume of lending according to time period. The time period measures the number of years between loan issue and loan maturity.

In short, this section demonstrates that property titles were not a barrier to mortgage lending in rural Madras. However, lenders provided mortgage instruments as secondary rather than primary loans. The questions that remain consider the alternatives to mortgage lending and whether lenders secured loans with other forms of contract. To these questions we now turn.

3.4 Contract Law and Rural Credit

The establishment of Crown rule in 1857 brought with it a new legislature. The colonial administration divided legislative responsibilities between federal and provincial governments. Both governments designed laws while the judiciary enforced these laws. As part of this 'formalising' process, the colonial government, at the federal level, enforced contract laws to regulate markets. More specifically, the contract laws regulated indigenous trading instruments or *Hundis*. The term *hundi* describes a variety of negotiated commercial instruments used in financial transactions throughout Indian history. There was non-uniformity in the design of *hundi*

instruments during the colonial period. The colonial government implemented a series of laws to unify and regulate diverse *hundi* arrangements in the late nineteenth century. [286]

The government enforced two contract laws in the late nineteenth century, both of which had a significant bearing on the rural credit market. The 1872 India Contract Act (ICA) and the 1881 Negotiable Instruments Act (NIA) encouraged and regulated the use of contracts in rural credit.[287] The NIA was the colonial government's attempt at regulating *hundi* transactions. The act refrained from the use of the word *hundi* but instead attempted to create an accessible law that uniformly regulated any negotiated instrument. The act defined a negotiable instrument as, 'a promissory note, a bill of exchange or cheque payable either to order or to bearer.'[288] The act further defines each instrument as follows:

> A promissory note is an instrument in writing (not being a bank-note or a currency-note) containing an unconditional undertaking signed by the maker, to pay a certain sum of money only to, or to the order of, a certain person, or to the bearer of the instrument.
>
> A bill of exchange is an instrument in writing containing an unconditional order, signed by the maker, directing a certain person to pay a certain sum of money only to, or to the order of, a certain person or to the bearer of the instrument.
>
> A cheque is a bill of exchange drawn on a specified banker and not expressed to be payable otherwise than on demand.[289]

The challenge for the colonial government was to integrate markets into this formal institutional structure. Indeed, an extensive scholarship demonstrates the failures of the colonial state to integrate the use of indigenous instruments under the umbrella of unified contract laws.[290] Martin describes the period 1857-1947 as one of 'discontinuity' as the state made attempts to marginalise indigenous *hundi* instruments through a series of codified laws. As a result, judges faced difficulties in hearing disputes involving *hundi* transactions that weren't adequately regulated in the NIA. Judges had a choice between arbitrating based on an applied judicial structure from Britain or the use of local precedent to deal with disputes involving *hundi* instruments.[291] Roy provides examples

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[286] See Abraham, "Colonial Law in Early British Malabar" and Martin, "Project Codification", for an assessment of these laws in failing to account for the diversity of indigenous commercial instruments.

[287] Section 10 of the India Contract Act defined a contract as, 'All agreements are contracts if they are made by the free consent of parties competent to contract for a lawful consideration and with a lawful object, and are not hereby expressly declared to be void.'

[288] Section 13, Negotiable Instruments Act 1881.

[289] Sections 4 -7, Negotiable Instruments Act 1881.

[290] Abraham, "Colonial Law in Early British Malabar"; Martin, "Project Codification"; Roy, "The Monsoon".

[291] Martin, "Project Codification", 70-73.

of hundi transactions used by Chettiar bankers. The *Darshani* instrument was payable on sight, the *Muttadi* instrument defined a specific period of payment on paper and, what was commonly used by Chettiar bankers in this period, a *Nadappu* or flexible period of repayment dependent on cash flow. With each *hundi* displaying a complexity beyond the structure created in the NIA, judges were unprepared to deal with transactions of this nature.[292] Colonial administrators seemed aware of this problem. However, the government's solution was to empower agents and judges to classify the ambiguous instrument under one of the three categories in the NIA. Section 17 of the NIA contained a provision for 'Ambiguous Instruments' where, 'an instrument may be construed either as a promissory note or a bill of exchange, the holder may at his election treat it as either and the instrument shall be thenceforth treated accordingly.'[293] The provision recognized the diversity in *hundi* instruments as it enforced a vague instruction for judges to use the three known instruments as the point of comparison for others. In this context, the law designated the promissory note as the model instrument in rural credit.

The key difference between promissory notes and bills of exchange was their tradability. Promissory notes were fixed contracts. Referring to contracts in rural credit markets, the NIA declared that 'where a debtor, owing several distinct debts to one person, makes a payment to him, either with the express intimation or under circumstances implying, that the payment is to be applied to the discharge of some particular debt, they payment if accepted, must be applied accordingly.'[294] The act referred to a model debt contract as, 'A owes B, among other debts, 1,000 rupees upon a promissory note, which falls due on the first June. He owes B no other debt of the amount. On the first June A pays to B 1,000 rupees. The payment is to be applied to the discharge of the promissory note.'[295] By referring to promissory notes as a model example of a debt contract, the NIA confirmed its legitimacy as legally binding.

[292] Roy, "The Monsoon", 345-347.

[293] Section 17, Negotiable Instruments Act 1881.

[294] Section 59, Negotiable Instruments Act 1881.

[295] Section 59, Negotiable Instruments Act 1881.

Figure 3.6 Model promissory note in 1930

APPENDIX F-IV-2.
(Form of Pronote)

No.

Rs.

198

Translation.

'No. 'Rs. . . . . .'

(Tamil) date . . . . corresponding to (English), date . . . .19 . .

The promissory note executed in favour of Devekottai V. At. N. Natesan Chettiyar Avargal, who has got a firm in Dindigul, by

is as follows:—

The amount received by me/us in cash as loan bearing interest from of your firm is Rs. . On demand, I/we promise to pay to you or to your order in cash the principal together with interest from this date on this sum of Rupees at per cent per mensem.

Witnesses—

Written and attested by—

Source: *Provincial Banking Enquiry Vol. III,* 1215.

Despite the varied design of pro-notes used in the credit market, some similar features brought this instrument under the purview of nineteenth century contract laws. Figure 3.6 illustrates the key characteristics of commonly used promissory notes. In general, lending terms including the loan principal, rate of interest and repayment or maturity date were defined on pro-notes. Signatures or thumb prints from lenders, borrowers and co-applicants were universal features of these contracts. As shown above, the obligation to repay fell on both the borrower and guarantor, as illustrated by the wording of 'me/us' and 'I/we' in Figure 3.6. Borrowers that did not have the skills to read promissory notes typically relied on the assistance of teachers in local schools as well as village accountants and clerks. According to the Provincial Banking Enquiry, borrowers approached, 'the village schoolmaster, or *karnam*[296] or other friend conversant with arithmetic to ensure that he has not been cheated.'[297] Lenders executed notes that distinguished between cash and grain loans while enforcing specific interest rates. Creditors presented pro-notes, similar to the illustration in Figure 3.6, to local courts following defaults. When presenting pro-notes, lenders petitioned courts for either the repayment of loans in cash or the transfer of the borrower's assets.

[296] *Karnam* refers to local accountants in villages.

[297] *Provincial Banking Enquiry*, 220.

Data from village surveys and court records show that creditors used promissory notes more frequently than mortgages in the late 1920s and early 1930s. As shown in Table 3.4, the majority of rural lending in villages was unsecured in the late 1920s. Over half of the loans provided in the 80 surveyed villages were unsecured. Mortgages were less frequent in the dry districts. The ratio of unsecured to total lending in the villages surveyed in the Kurnool district was 96, 74 and 87 per cent.[298] Data from the government's Justice Department shows that mortgages were less frequently used than the data from village surveys suggest. The Civil Court Statistics series from Civil Justice Reports show the total number of civil disputes heard across the district courts and the High Court in Madras. The reports demarcate the number of disputes involving money and further categorised those disputes involving mortgages. Based on these annual surveys, creditors attached mortgage instruments to between 4 and 5 per cent of all the credit transactions in dispute between 1925 and 1935.[299] The majority of credit disputes in courts involved loans that were not underwritten by mortgage instruments. Data from thirteen district courts in the early 1930s demonstrate that creditors more commonly attached promissory notes to credit disputes. As illustrated in Table 3.5, of the surveyed 257,727 credit transactions in dispute between 1930 and 1934, creditors attached promissory notes to 212,619 transactions and mortgages to 35,723 transactions. Non-contracted and mortgage instruments were rare while promissory notes were commonly attached contracts to disputed credit transactions in courts.

Table 3.4 Security on rural loans in 79 villages, 1929

Village Type	*Villages*	*Total Lending (rupees)*	*Unsecured Lending (rupees)*	*Ratio Unsecured to Total*
Mostly Wet	36	2,775,772	1,395,967	0.50
Mostly Dry	43	2,476,317	1,363,587	0.55

Source: *Provincial Banking Enquiry*.
Notes: The Banking Enquiry Committee surveyed between 1 and 6 villages per district. Distinction between wet and dry conducted in the same format as Table 2.3 in previous chapter. Credit from cooperatives and government excluded for this analysis. Only unsecured and mortgage loans from moneylenders included in the data set. Calculations made by the author.

[298] *Provincial Banking Enquiry*.

[299] *Statistics of Civil Courts in the Madras Presidency*, (Madras, 1925-1935).

Table 3.5 Credit disputes in 13 district courts, 1930-1934

Year	*Disputes (1)*	*Disputes with Pro-Notes (2)*	*Disputes with Mortgages (3)*	*Ratio 2 to 1 (per cent)*	*Ratio 3 to 1 (per cent)*
1930	47,975	37,859	6096	78.9	12.7
1931	53,620	44,772	5953	83.5	11.1
1932	55,857	49,462	9081	88.6	16.3
1933	52,881	42,918	7442	81.2	14.1
1934	47,394	37,608	7151	79.4	15.1

Source: *Report on Agricultural Indebtedness,* 44.
Notes: The data refers to cases in lower courts involving moneylenders and borrowers who listed their profession as agriculture or cultivation. The total numbers of disputes were classified according to the security provided on loans. The cases involving promissory notes (2) were not secured against any form of physical collateral. The data constitutes approximately 10 per cent of the total number of credit disputes in the same time period. According to civil court statistics, the number of cases involving money or movable property was 478,404, 541,486, 554,394, 556815 and 499,013 in the years 1930 to 1934. See *Statistics of Civil Courts 1930-1934*.

Why were promissory notes more common than mortgages in the rural credit market? One explanation is that the decline in land value during the Depression discouraged creditors from attaching mortgage instruments. The value of mortgage was tied to the value of land. The value of land declined in crisis years due to deflationary pressures and unpaid tax burdens. As discussed, borrowers that defaulted on loans were plausibly tax defaulters in crisis years. Lenders that executed land transfers undertook the previous owner's unpaid tax liability.[300] Manikumar shows that while the number of auctions increased during the Depression, the government was the primary bidder for these lands. There was limited private interest in land auctions during the Depression.[301] However, this does not explain the persistent low use of mortgage instruments. Despite rising prices in the mid-1920s, lenders attached mortgages to less than five per cent of credit transactions in court disputes.

Another explanation, and the focus of the next section of this chapter, is that creditors relied on credit instruments that were most cost-efficient, relative to the value of loans. The use of promissory notes incurred lower transaction costs, relative to mortgages. The design of contract laws made the use of promissory notes lucrative for the moneylender. Court judgements were

[300] *MELAC Report*, 187.

[301] Manikumar, *A Colonial Economy,* 63.

expedited in cases with signed promissory notes. Lenders were presented with an accelerated forum of appeal to enforce the repayment of loans. This was supplemented by lower fees when creditors presented pro-notes rather than mortgage contracts in courts. The next section analyses the costs of enforcing different contracts and demonstrates the modes of transmission of these costs on the price of credit.

3.5 Contract Enforcement and Credit Pricing

Courts were valuable institutions for rural moneylenders. Theoretically, courts offered creditors a form of judicial protection. As discussed in the previous chapter, default rates were high in Madras. The requirement for judicial protection was, therefore, also high. However, courts did not offer creditors time- and cost-efficient legal protection. The cost structure of credit proceedings in courts differed by type of contract.

Indian courts ratified transfers of land through sale or mortgage.[302] The government needed to record changes in land ownership. Land taxes were a valuable source of revenue for the colonial government. As a deterrent to tax evasion, the judiciary enforced title transfers in courts to ensure transparent information on landholders and tax assignment.[303] As a result, the moneylender's incentive to link credit and land markets was tied to the productivity of legal institutions. Timely and inexpensive proceedings could ensure a more effective execution of land transfers as an enforced penalty on defaulted borrowers. In contrast, lengthy and expensive proceedings incentivised defaulters to extend disputes to delay or reverse the transfer of mortgaged land. The incentive structure of the moneylender can be measured by the difference between the period of borrowing in year *n-1* and the expected duration of a mortgage dispute in year *n*. Put differently, creditors provided mortgage loans if the terms of borrowing exceeded the time required to execute the transfer of land in courts.

Owing to the inefficiency of courts, creditors in Madras did not easily benefit from judicial protection. In 1922, the *munsiff* courts, the lowest courts in the province, reported a backlog of 52,559 cases of which 11,990 were pending for over one year.[304] Cases appealed in the Madras High Court in 1923 lay idle for 24 months.[305] As shown in Figure 3.7, the ratio of enforcement to loan terms simultaneously stressed both the disincentive to approach legal forums and the absence

[302] *Report on Agricultural Indebtedness,* 15.

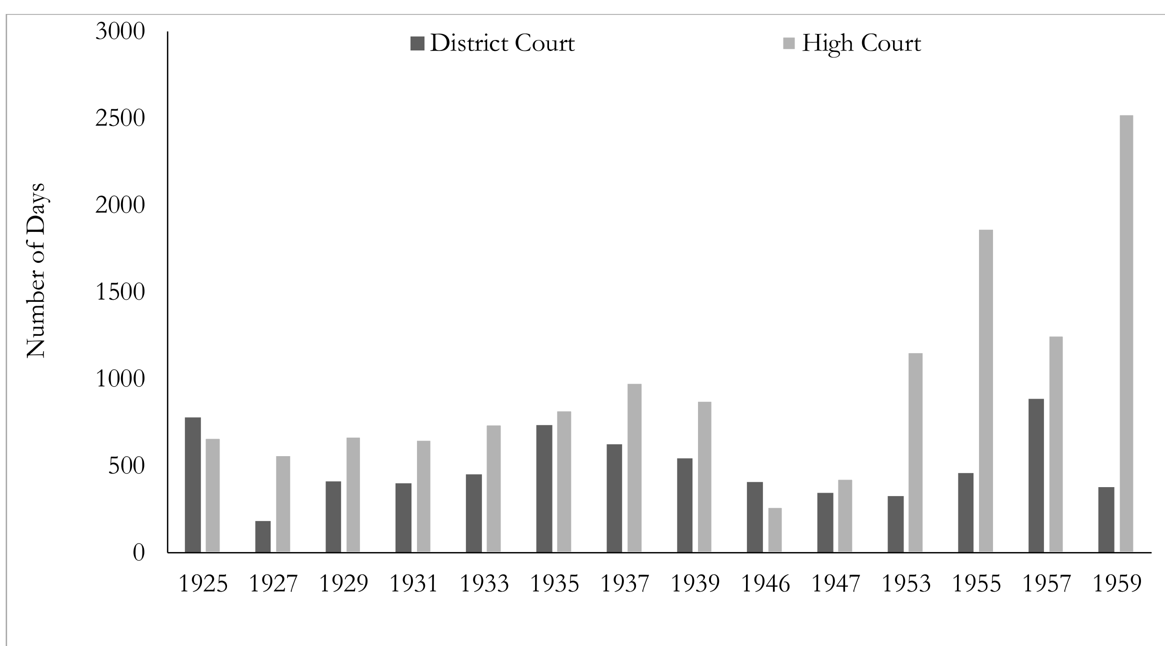
[303] *Provincial Banking Enquiry,* 184.

[304] Foulkes, *Local Autonomy*, 105.

[305] Foulkes, *Local Autonomy*, 117-118.

of land transfers in defaulted loans.[306] As previously mentioned, creditors typically provided short-term, four to six-month loans to peasants in Madras. Yet, credit disputes were generally heard over a period of one to two years in District Courts. The duration of disputes in the High Court showed greater unpredictability. Proceedings generally lasted between 20 and 36 months in the 1930s and 1940s. By 1955, this increased significantly with disputes enduring an interval of between three and seven years. The average length of civil disputes in the High Court doubled between 1958 and 1959 alone. According to the Provincial Banking Enquiry, 'it is uncommon for the ryot to go out of his way to repay a money-lender and the fullest possible advantage is taken of the law's delays by procrastination in court and by evading or circumventing the court's efforts on behalf of the decree holder.'[307]

Figure 3.7 Average duration of civil disputes in Madras, 1925-59



Source: *Statistics of Civil Courts 1925-1959.*
Notes: Duration measured as the average number of days taken between initial hearing and final judgement for civil cases in a given year. Data is not available for the years 1940-44, 1948-1953. The data provides an understated account of the duration of cases in provincial courts. The data refers to appellate forums and has not considered the duration of cases in lower rural courts. The inclusion of disputes in *munsiff* (village) courts, subdivisional tribunals or small cause courts would inflate the current estimation of dispute duration. Similarly, the delays in legal recourse were not restricted to the duration of contested suits alone but also in the execution of judgements. The sale and registration of new titles was in itself a lengthy process. An all-inclusive estimation of the above analysis widens the difference between the duration of court disputes and the time span of cultivation loans.

[306] Baker, *An Indian Rural Economy*, discusses the importance of delays in court judgements as a dissuading factor for the Chettiar bankers in South India to provide agricultural loans. The lack of legal protection diverted their attention away from rural Madras and towards plantations in Burma.

[307] *Provincial Banking Enquiry,* 84.

Lenders and borrowers bore the costs of lengthy legal disputes. The cost of enforcement in courts was commonly higher than the size of loans. The lender's incentive to provide a mortgage-backed loan was tied to the ratio of the expected cost of enforcement to size of the loan itself. In other words, moneylenders provided mortgage loans if the cost of enforcing land transfers in court was lower than the size of the loan. This justified the provision of loans that were secured by mortgage. Loans of a certain value, which exceeded the provincial average, satisfied the high enforcement costs in courts.

The Provincial Banking Enquiry provides an estimate of the costs incurred by litigants in a 'City Civil Court' and the Madras High Court in 1930. The model includes an estimate of the bills raised by courts and the fees that clients paid to lawyers. Court fees in the lower courts included stamp charges on the plaint and the costs incurred to process the following documents: the *vakalat* or affidavits between clients and lawyers, summons to the defendant, subpoenas and witness documents, the application documents and the copy of the decree. This, according to the Banking Enquiry, cost the disputants 220 rupees and 15 annas. Clients paid, on average, 118 rupees to lawyers to litigate in civil courts. The model cost of dispute in the civil court added up to 338 rupees and 15 annas.[308] Disputants at the High Court level incurred higher costs. Stamp charges were similar to the civil court but, according to the Banking Enquiry, plaintiffs and defendants incurred higher charges for the processing of court documents. Disputing parties also paid higher fees to lawyers and paid the High Court a one-time fee for the processing of documents for 'first day hearing.' The High Court charges included 235 rupees and seven annas for the court fees and 165 rupees and three annas for the bills raised by lawyers. In total, litigating in the High Court in 1930 cost approximately 400 rupees and 10 annas. Assuming agents registered credit disputes in the civil court and appealed the verdict in the High Court, they incurred an estimated cost of 739 rupees.[309]

These model costs do not account for additional expenses, including transport costs and the costs of litigating in rural tribunals and lower district courts. The cost of title transfer and land registration generated a set of expenses that are also not presented in the cost tables.[310] According to one official report in 1935,

> Cases brought to court for unsecured loans far exceed those for secured debts. The average duration of suits is startlingly high, exceeding 400 days or approaching a period of two years. One can imagine the great cost to the parties, incurred in travelling long distances to appear

[308] *Provincial Banking Enquiry*, 183.

[309] *Provincial Banking Enquiry*, 183.

[310] The Provincial Banking Enquiry Committee's estimated cost of land registration was 26 rupees and six annas. See *Provincial Banking Enquiry*, 183.

> at these courts over and over again for a single suit, often to waste their time and money in idle waiting because of inevitable adjournments.[311]

Enforcing promissory notes generated lower legal costs than enforcing mortgages. Loans declared on signed promissory notes were charged a flat court fee which was lower than the costs of court disputes on mortgage loans. Litigants incurred a flat cost of 270 rupees inclusive of decree execution and advocate fees if they presented judges with signed promissory notes.[312] Enforcing mortgage contracts in civil courts was 30 per cent more expensive than enforcing promissory notes in the same forum. Mortgage disputes in the High Court cost lenders and borrowers 1.5 times more than promissory note disputes in the same forum. As recorded in the previous chapter, from the Provincial Banking Enquiry's estimates, the average debt per acre was 58 rupees for the province in 1929. The costs of enforcing promissory notes and mortgage contracts were five and seven times higher than the average debt per acre in the province. These enforcement costs were more comparable, being only marginally higher, than the costs of purchasing working cattle in the late colonial period.[313] In other words, enforcement costs were significantly higher than the average size of working capital loans in the 1920s and 1930s.

In cases where the courts ruled in favour of the lender, judges typically ordered for borrowers to bear some or all of the court fees. Judges determined the allocation of costs to plaintiffs and defendants, and this allocation differed on a case-by-case basis. Judges could dismiss cases with some or all the costs charged to the plaintiff or the defendant. Itemised billing and the charges placed by the courts on the litigants were not discussed in the individual case judgements. When courts raised bills on the litigants, this only included court fees and fees for document processing. Even when confident of victory, creditors needed to budget for other costs, including lawyer fees, transport costs and registration charges.

The costs of judicial proceedings incentivised moneylenders to operate a multi-layered enforcement structure in Madras. Primary loans were unsecured. First and second time defaults changed the contractual nature of loans. Following a first round of default, lenders upgraded unsecured loans to loans secured by promissory notes. Short periods of repayment were fixed on pro-notes. Interest rates compounded following rounds of default.[314] The law stipulated a maximum three-year limitation on each pro-note which necessitated a fresh renewal of a previous

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[311] *Report on agricultural indebtedness*, 45.

[312] *Provincial Banking Enquiry*, 183.

[313] These costs are discussed in Chapter 2. The costs of purchasing working cattle generally varied between 200 and 400 rupees in the late 1930s.

[314] *Report on Agricultural Indebtedness*, 15.

note following its expiry. With each renewal, lenders added the compounded interest from previous defaults into the principal amount. This process continued until creditors upgraded the initial promissory note into a mortgage-backed loan.[315]

Contract laws allowed lenders the flexibility to transmit the cost of enforcement into higher interest rates in pro-notes. According to Section 79 of the NIA,

> When interest at a specified rate is expressly made payable on a promissory note or bill of exchange, interest shall be calculated at the rate specified, on the amount of the principal money due thereon, from the date of the instrument, until tender or realization of such amount, or until such date after the institution of a suit to recover such amount as the court directs.[316]

Judges issued judgements based on terms in signed contracts. Promissory notes were more cost-effective in this respect. Contracts, without the added cost of land transfer ratification, demonstrated a mutual recognition of default. Lenders used mortgage instruments as a last resort. Land transfer was a repayment option when multiple defaults signalled the borrower's inability to repay.[317] Put differently, mortgages were cost-effective when the size of compounded debt matched the cost of enforcing land transfers in court.

The price of credit cannot be taken in isolation from the size of the loan in full, principal plus interest rate. Data that matches the price of credit alone to the cost of enforcement provides an inaccurate result. Moneylenders inflated loan principals in contracts to compensate for charging lower-than-desired interest rates. Put differently, lenders attached contracts which declared higher loan principals than the principal in the physical transaction. By doing this, lenders could declare low interest rates in contracts. As such, the interest rates that moneylenders reported to government surveys and other sources were possibly lower than the actual rates charged. One reason for this contract manipulation was that moneylenders presented contracts with low interest rates in courts to obtain favourable judgements. Indeed, large loans with low interest rates seemed less exploitative, and within the gambit of nineteenth century contract laws, than vice versa. Sources recorded this method of contract manipulation more thoroughly in the 1940s, following government intervention in the late 1930s. To evade the interest rate ceiling, moneylenders inflated

[315] *Report on Agricultural Indebtedness,* 15.

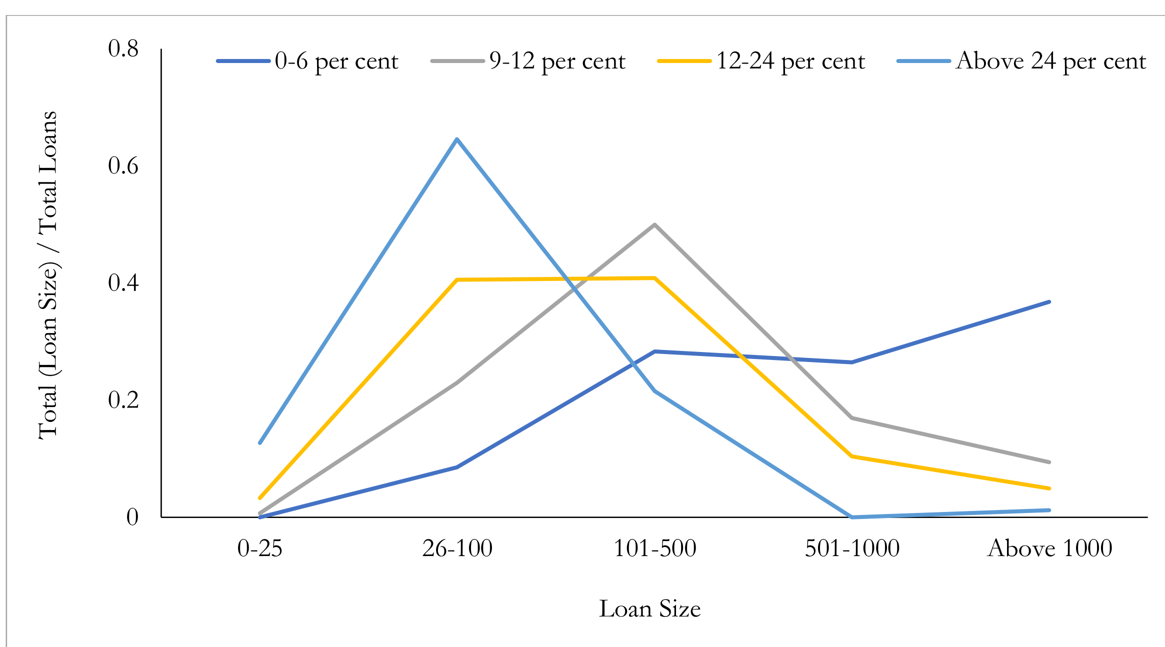
[316] Section 80 of the NIA allowed judges to enforce interest rates of 18 per cent when pro-notes did not declare a specified rate. According to the Act, 'When no rate of interest is specified in the instrument, interest on the amount due thereon shall, [notwithstanding any agreement relating to interest between any parties to the instrument], be calculated at the rate of 18[eighteen per centum] per annum, from the date at which the same ought to have been paid by the party charged, until tender or realization of the amount due thereon, or until such date after the institution of a suit to recover such amount as the court directs.'

[317] *Report on Agricultural Indebtedness*, 15.

loan principals on contracts. This arrangement is discussed in more complete detail in the next chapter.

Data from a survey of mortgage loans in 1935 shows that lenders coordinated loan principals and interest rates to match the cost of enforcement. Lenders added enforcement costs to the loan principals, interest rates or both. Interest rates were low on large loans and high on small loans. The number of loans below 100 rupees and yielding rates below six per cent were low. Conversely, the number of loans between 26 and 100 rupees and yielding rates above 24 per cent were high. As shown in Figure 3.8, there was a linear increase in the number of lowest-priced loans across size categories. The number of loans priced nine per cent and higher presented inverted-U graphs. The peak number of loans yielding rates between nine and 12 per cent were sized between 100 and 500 rupees. The peak number of loans yielding rates above 24 per cent was sized between 26 and 100 rupees. Creditors charged low interest rates of between 0 and six per cent on loans above 1000 rupees.

Figure 3.8 Mortgage loans by size and interest rate, 1930-1934



Source: *Report on Agricultural Indebtedness*, 36.
Notes: Government commissioned surveyors collected data on mortgage loans in two villages per district, across 27 districts. The source categorised data by the annual number of mortgages without possession, mortgages with possession and mortgage bonds between 1930 and 1934. This allows an analysis of 12,503 mortgage transactions, valued at 6.9 million rupees. The source measures two variables: the number of loans of a certain size and the interest rates attached to those loans. The source identifies five loan size categories and four interest rate categories. The graph matches the size of loan to interest rates. The author measures the importance of each loan size category, relative to the interest rate charged. For example, if 60 per cent of loans priced above 24 per cent were between 26 and 100 rupees, that is relative to all loans priced above 24 per cent. Therefore, the majority of loans between 26 and 100 rupees yielded interest rates above 24 per cent. The opposite is the case for loans above 1000 rupees. The source provides annual data between 1930 and 1934. The author aggregates the data and does not account for any temporal shifts.

The moneylenders interviewed in government reports highlighted the relationship between the size of loans and enforcement costs. The lenders claimed they would only initiate legal proceedings if the size of loan exceeded legal costs. Summarising one interview with a moneylender from the Ramnad district, an official report claimed:

> Court-fees and court costs are extravagant and the law's delays are tremendous. He (anonymous moneylender) has to incur as much as Rs. 50 to Rs. 100, in costs in a suit for Rs. 100. He proposes disposal of civil cases by lots as the 'decision in civil courts are often so frivolous and arbitrary.' He says that he is compelled to bribe all court officials except the Judge![318]

The moneylender's vulnerability to enforcement costs and seasonality added to the price of credit. Loans for cultivation expenses were short term, increasing the lender's costs in times of default. Creditors providing longer term loans, usually for the purchase or improvement to land or capital, were more willing to collateralise land and charge lower rates of interest. Loans for cultivation expenses were, 'only six months' while loans for larger expenditures were 'more than one year.' In the case of the former, one landowner reported interest rates of '2 to 3 per cent per *mensem*'. The same landowner reported rates of '1.5 per cent per *mensem*' in the case of the latter.[319] Creditors created a minimum cost barrier to account for the expensive legal proceedings following default. Substantial loans over long periods surpassed the barrier. Petty, short-term credit did not in the first instance. Secondary and tertiary defaults compounded the value of these loans till repayment crossed the barrier. According to an interview of one borrower in 1935, an initial loan of 40 rupees compounded to 400 rupees after a 'few years.' At this point, the creditor took possession of the borrower's land, worth 1000 rupees, in court.[320]

The account books of two moneylenders in the Chingleput district note the transmission of varied contract enforcement costs on the price of credit. A government report in 1935 summarised the amount of lending, type of credit instrument used and price of loans from the two lenders. Both creditors provided loans to cultivators in the same village. One had an exposure of over 100,000 rupees and the other of between 40,000 and 45,000 rupees. Both lenders executed promissory notes with defaulting borrowers. The interest rates mentioned on signed pro-notes exceeded the rates charged on credit repaid. As such, both creditors charged different interest rates for out-of-court settlements and court disputes. Lenders accepted non-court enforced contracts,

[318] *Report on Agricultural Indebtedness*, 17.

[319] *Provincial Banking Enquiry Vol. III*, 621.

[320] *Report on Agricultural Indebtedness*, 18.

where they charged lower interest rates on loans repaid out of court. When informal arbitration failed, both lenders charged a 'penal interest' on defaulted loans that were recovered in court. According to one moneylender, the Depression and subsequent wave of defaults compels them to 'to take his clients to court…which means that the penal rate of interest of 24 per cent comes into operation.'[321]

Table 3.6 Price of credit from two lenders, 1935

Lender	*Lending Exposure (rupees)*	*Contracted Loans (per cent)*	*Contracted Interest (annual)*	*Settled Interest (annual)*
Lender A	100,000	66	18-24	10.5-12
Lender B	40,000-45,000	100	18-24	10

Source: *Report on Agricultural Indebtedness*, 15-16.
Notes: Data extrapolated from qualitative evidence in the source. Contracted loans refer to the ratio of pro-note loans to total. Contracted interest refers to the penal rate charged by the moneylender to account for the costs of enforcement in court. Settled interest refers to prices charged if borrowers repaid loans out of court.

Moneylenders, from the case study presented in Table 3.6, provided loans for a period of 10 months. Each lender executed pro-notes defining the repayment of loans in monthly instalments. Borrowers defaulted on the majority of the loans provided by both lenders between 1925 and 1935. Filtered down, the monthly interest rate on privately settled loans was between one and 1.2 per cent. The monthly rate on court disputed defaults was between 1.8 and 2.4 per cent, or between 50 and 140 per cent higher than rates on undisputed credit. In other words, the varied costs of enforcing different credit contract types explain the variation in the prices of credit at the level of the individual loan. Creditors increased interest rates with primary and secondary defaults to account for the costs of enforcing contracts in court and court-ordered transfers of the borrower's assets.

The cost structure of credit proceedings impacted the regional and household variations in credit access within the province. Creditors granted extensions to smallholders as land transfers were an insurance against the enforcement costs. As such, landless borrowers were most affected by enforcement costs. Poor peasants in dry areas, especially tenants and the smallholders that owned low-value land, were less likely to receive loan extensions as enforcement costs were too high. Indeed, the previous chapter of the thesis shows that creditors were less lenient in famine-prone districts, such as Bellary, than in the deltas. The average size of loans in these districts was

[321] *Report on Agricultural Indebtedness*, 16.

significantly lower than the size of loans in the deltas. As recorded, the Provincial Banking Enquiry's survey of select villages shows that the average debt per acre was 17 rupees in Bellary and 116 rupees in Tanjore in 1929. Enforcing contracts in courts was between 16 and 24 times, depending on the type of contract, the value of the debt per acre in Bellary. As recorded in one survey of the Bellary district, poor peasants 'can seldom indulge in the delights of civil litigation.'[322] The size of loans were low and value of collateral negligible, leading to harsher credit terms for peasant borrowers in the dry districts.

3.6 Conclusion

Moneylenders faced an enforcement cost conundrum in Madras. Whereas banks and formal financial organizations relied on contracts and courts to recover unpaid loans, these proceedings were expensive solutions for informal moneylenders. Yet, in the unregulated credit market in Madras, contract laws let moneylenders price credit freely, allowing for some element of leniency as lenders granted loan extensions to defaulting borrowers. This leniency came at a high price. When unsecured loans remained unpaid for long periods, moneylenders attached contracts to these loans while adding the costs of judicial proceedings to the interest rates charged. This chapter records the relationship between contract enforcement and credit pricing in a fragile credit market in the early 1930s and finds evidence that creditors adopted a three-stage loan upgrading arrangement to enforce the repayment of defaulted loans.

The size of loans was a decisive factor in determining the use of credit contracts in rural Madras. When the combination of principal and interest exceeded legal costs, moneylenders attached contracts to loans. Put differently, creditors increased the price of contracted loans to satisfy the costs of enforcing contracts. Two commonly used contracts in the 1930s were mortgage instruments and promissory notes. Each instrument was governed by a different set of laws. Land laws, enforced in the nineteenth and early-twentieth century dictated the use of mortgages while the 1881 Negotiable Instruments Act dictated the use of promissory notes. By the 1930s, these laws incentivised lending by providing moneylenders a layer of protection. In this context, promissory notes were cheaper to enforce and more commonly used than mortgages. Creditors upgraded loans following first- and second-time defaults, attaching promissory notes following the first and mortgage instruments following the second stage.

[322] *District Gazetteers: Bellary,* 101.

This chapter has lessons for the role of institutions in credit markets. The combination of expensive judicial proceedings and informal credit markets in colonial India highlights the inverse relationship between transaction costs and equity in rural credit. The higher the transaction cost, the more inequitable the exchange. Courts were expensive but contract laws protected moneylenders. Borrowers bore the costs of high default rates and high enforcement costs in rural credit. The problem was more severe for peasants in drier and poorer districts. When loans were small and seasonal, the use of contracts was unlucrative. Enforcement was through private negotiations and credit terms were harsh for the borrowers. This chapter further demonstrates that the isolated act to strengthen property rights had an insignificant impact when courts were unproductive. Enforcement was problematic when the costs to enforce contracts exceeded the size of loans.

Chapter 4. The Impact of Intervention on Credit Supply, 1935-1960

4.1 Introduction

When studying informal credit markets, economists tend to ask the following question: Do informal credit markets operate efficiently or as vehicles of exploitation? One interpretation holds that high interest rates signal market failure.[323] In the absence of competition, moneylenders leverage their monopolisation of credit markets to extract from peasants. Another interpretation suggests that lenders responded to market incentives such that lending arrangements, including high interest rates, reflect the costs of exchange.[324]

The provincial government asked a similar question of rural credit markets in Madras. They answered the question by promoting the first interpretation on market exploitation. Explaining the key factor driving high interest rates in the informal market, Indian economists and politicians suggested that in villages without banks and few moneylenders, credit markets were non-competitive in the 1930s. In their view, moneylenders deliberately priced loans higher than the cost of providing them to extract rents at the expense of the borrower. When the Great Depression hit and the wave of subsequent credit defaults made the market seem especially inequitable to the borrower, lawmakers in colonial Madras used this version of market failure to justify artificial price controls in the form of interest rate ceilings in the late-1930s. The government enforced a series of credit regulations from the mid-1930s, culminating in 1938 with the interest rate ceiling of 6.25 per cent (annualised) on all loans provided by rural moneylenders.

The success of artificial price controls hinged on the cooperation of moneylenders as the sole suppliers of credit. Moneylenders could have responded to the interest rate ceiling in three ways. First, they could have obeyed the law and provided credit at lower prices. Second, they could have supplied less credit as it was unprofitable to lend at low rates. Third, they could have evaded the

[323] Bhaduri, "A Study in Agricultural Backwardness"; Patnaik, "The Agrarian Question"; Thorner, "Semi-feudalism or Capitalism".

[324] Stiglitz, "Chapter 5: Economic Organization"; Besley, "How do Market Failures Justify Interventions in the Rural Credit Market?"; Ghosh and Ray, "Information and Enforcement".

law altogether and continued providing credit at high prices. The chapter shows that creditors in Madras opted for versions of the second and third responses.

In the short term, the impact of credit intervention was a contraction in the supply of credit and the emergence of a black-market for loans priced above the ceiling. The region-specific features of the credit market in Madras allowed creditors to make swift supply changes. The market functioned seasonally, enabling creditors to issue fresh loans in one year but withdraw from issuing new loans in the following year. From the start of credit legislation in the mid-1930s, and in expectation of stronger regulation in the late-1930s, some cultivators stopped allocating disposable income to lending in the mortgage and contracted-credit market in the short-term. While data shows a contraction in credit supply, primary sources also indicate that creditors continued to lend but outside the scope of laws and legal procedure. The interest rate ceiling was only enforceable by court judges. Judges lowered the interest rates in credit disputes to the legal limit. To avoid adhering to the law, creditors resorted to enforcement arrangements that evaded courts. Indeed, this accent on enforcement is a particular contribution of the chapter. Enforcement mechanisms have been studied in isolated spheres of courts and banking or crop sharing and financial intermediaries.[325] The chapter demonstrates that when cultivators were also village bankers, crop sharing arrangements were as viable an enforcement option as courts. Intervention increased the enforcement costs of formal arrangements but not informal arrangements, resulting in a transition in the supply of credit. The attempt to formally regulate the credit market, paradoxically, aided the shift of the market from formal to informal.[326]

If the goal was to create a more equal footing between moneylender and borrower then results from 1930s credit intervention were disappointing. There were few winners and several losers from credit intervention in Madras. Creditors that exited the market potentially lost, especially as the period after intervention was more economically stable than the period before. The borrowers lost as an already liquidity-constrained credit market became more inaccessible after intervention. The borrowers that accessed credit following intervention continued to pay high prices. The only potential winners were the lenders that operated outside the law. This situation resembles the type of welfare loss economists describe as 'deadweight loss'. Following the artificial price ceiling, the

[325] For formal credit and courts, see La Porta et al., "Law and Finance"; Djankov et al., "Courts"; Moro et al., "Creditor Protection". For informal enforcement and interlinked factor markets, see Bardhan, "Interlocking Factor Markets"; Braverman and Stiglitz, "Sharecropping".

[326] Schwecke, in a recent article on moneylending in nineteenth century Banares, distinguishes between a 'monetary inside' and a 'monetary outside'. Regulation seems to be at the centre of this distinction. Regulated capital markets where the law defined money transactions, in this case the monetary inside, co-existed with unregulated 'economic arenas' where money transactions occurred outside the scope of the administrative machinery. This study on Madras suggests that credit shifted to a similar version of a monetary outside following the interest rate ceiling in the 1930s. See Schwecke, "A Tangled Jungle of Disorderly Transactions".

market operated less efficiently as credit supply declined and prices were less transparent than before. The market also operated either as or more inequitably as the remaining creditors provided loans at pre-intervention prices.

This chapter provides new lessons for case studies of similar credit interventions in other Indian provinces. Recent studies by Chaudhary and Swamy show that government-imposed restrictions on land transfers in Bombay (1879) and Punjab (1900) had a significant impact on the supply of mortgage credit.[327] Supply contracted in the short term. Surprisingly, Chaudhary and Swamy find that this credit contraction had an insignificant impact on investment and development in both provinces. However, by focusing on the mortgage market alone, the authors do not consider the rural credit market fully and overestimate the contraction in supply. The mortgage loans market accounted for one part of the entire rural credit supply. Reduction in mortgage loans, therefore, does not necessarily suggest that credit supply contracted. More likely, and as shown in this chapter, creditors avoided mortgage loans after interventions. Courts were required to enforce mortgage contracts but court judges also enforced lending restrictions. Mortgages declined because moneylenders avoided courts which does not imply that credit supply contracted. Indeed, Chaudhary and Swamy also find that the dominant moneylenders in Punjab shifted from professional to agriculturist after land transfer restrictions in 1900. This chapter suggests that this shift occurred because cultivator-cum-moneylenders had greater enforcement flexibility to operate outside the scope of laws and formal procedures. By looking at the market for mortgage loans, land sales, pro-note and unsecured loans, this chapter finds that the actual outcome from state-imposed restrictions on rural credit was a partial supply contraction combined with a shift in lending arrangements that allowed creditors to operate outside the law.

This chapter proceeds in four stages. The first looks at debates in the Legislative Council and key publications from economists and policymakers in colonial Madras to discuss the design of credit intervention, focusing on the arguments made by key political actors justifying the importance of the interest rate ceiling. The second uses new data from land registration offices in the rural districts to examine the impact of intervention on the market for mortgage loans. The third uses case judgements and credit surveys in the 1940s to examine the conflict between the interest rate ceiling and nineteenth century contract laws and its resulting impact on the supply of contracted loans. The fourth uses credit surveys and contemporary studies to explore the relationship between enforcement costs and the shift in lending arrangements after intervention.

[327] Chaudhary and Swamy, "Protecting the Borrower", "A Policy of Credit Disruption".

4.2 Designing Credit Intervention

The colonial government, both federally and provincially, protected borrowers throughout the colonial period as it perceived high 'agricultural indebtedness' a barrier to development and effective governance in rural areas. State officials believed that cultivators needed to moderate their exposure to credit. From the mid-nineteenth century, the colonial headquarters delegated policymaking in rural credit to governments in the individual provinces. The government in Madras did not regulate rural credit until the 1930s.

The 1875 riots marked a transition in colonial attitudes towards moneylenders. The riots were not long after the 1857 rebellion, a time in which the colonial government feared peasant uprisings. The riots sparked the first of many legislative measures to counter the market power of moneylenders and protect borrowers.[328] Safeguarding the interests of the cultivator was determined a necessity to maintain peace in colonial India. As summarised by G S Forbes, member of the Madras Legislative Council in the early 1900s, 'it is a universal proverb in this country that the prosperity of the ryot is the prosperity of the raja.'[329] In this context, the *ryot* refers to the cultivator while the *raja*, literally translating to 'ruler', refers to the colonial administration.

Governments in Bombay and Punjab regulated rural credit in the late nineteenth century. The provincial government in Bombay enforced the 1879 Deccan Agriculturists Relief Act (DARA) in response to the riots. The DARA regulated rural credit in two ways. First, the government regulated land alienation. The government considered the Deccan Riots of 1875 a backlash from peasant cultivators to the market power of urban moneylenders in the Bombay Presidency. Lenders in rural Bombay were commonly urban traders. Loans were underwritten by mortgage instruments and default rates were high. As such, policymakers were concerned about the frequency of land transfers to non-cultivating moneylenders. Second, and a common theme of credit intervention in colonial India, the government empowered court judges to protect borrowers when credit terms favoured the moneylenders.[330] Judges granted loan extensions and imposed interest rate reductions in credit disputes. The government in late nineteenth century Punjab followed a similar strategy to the one in Bombay. The government enforced the Punjab

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[328] Strickland, "Cooperation and the Rural Problem of India", 510-511.

[329] *Proceedings of the Council of the Governor of Fort St George,* (Madras 1905), Appendix III.

[330] Chaudhary and Swamy, "Protecting the Borrower", shows that the 1879 Act led to a significant contraction in credit available to smallholder and tenant cultivators in the short and medium term. Kranton and Swamy, "The Hazards of Piecemeal Reform", shows that court protection disincentivised lenders from granting loan extensions to defaulters. Lenders preferred recovering loans in courts instead.

Land Alienation Act in 1900. This law regulated mortgages, especially restricting land transfers from cultivators to professional moneylenders.[331]

The government in Madras did not directly regulate rural credit markets until the late-1930s. Rural credit did not worry colonial officials in nineteenth century Madras the same way it did in Bombay or Punjab. The governments in Bombay and Punjab regulated credit to regulate land alienation. They acted on a belief that investment in land was poor because urban moneylenders took ownership and leased land to tenants at high rents. In Madras, cultivators were the moneylenders. Colonial officials did not regulate the market in the late nineteenth and early twentieth century as land alienation was not a concern.

The first attempt at regulating moneylenders in this region was in response to the impact of the Depression in the 1930s. According to Naidu and Vaidyanathan, wholesale prices of rice, cotton and groundnut declined by 52, 42 and 61 per cent between 1928 and 1933.[332] A shock to the market for credit, the halving of commodity prices in the early-1930s increased the number of defaults on agricultural loans. Cultivators were unable to repay credit bills as income from cultivation saw significant decline in the early-1930s. In order to finance this defaulted debt, cultivators supplemented ongoing obligations with extensions or secondary loans while the instability of prices persisted until the mid-1930s.[333] A government-commissioned survey of 141 villages in 1935 warned about the dangers of the post-Depression rural credit market. The survey reported the rising number of over-leveraged borrowers with unrepayable debt obligations.[334] As shown in previous chapters, borrowing for the purpose of repaying previously undertaken debt increased in the Depression period. Price deflation in the early 1930s had an especially detrimental impact on the borrowers with pre-1930 debt obligations. As suggested by Manikumar, the halving of commodity prices during the Depression doubled the real value of debts between 1930 and 1935.[335] The crash in prices of commodities and subsequent defaults on loans prompted the provincial government to implement a series of legislative measures to shield borrowers from compounding debt burdens.

Political changes, including the devolution of powers to Indian governments, further explains the timing of intervention. The inclusion of Indian policymakers in the provincial government in

[331] Chaudhary and Swamy, "A Policy of Credit Disruption", show that the law led to a reduction in the supply of credit in the short term but had a limited impact on private investment in rural Punjab.

[332] Naidu and Vaidyanathan, *The Madras Agriculturists Relief Act*, 18.

[333] *Report on Agricultural Indebtedness,* 42.

[334] By surveying 141 villages in 1935, the *Report on Agricultural Indebtedness* showed that the majority of loans went towards the financing of previously defaulted debt.

[335] Manikumar, *A Colonial Economy*, 18.

phases from 1909 motivated a more interventionist state. The colonial government devolved policymaking in select sectors to legislatures run by elected officials from Indian political parties. Rural credit was part of the devolved policy sector. There were three key political transitions in the early twentieth century: the 1909 India Councils Act (Morley-Minto Reforms), 1919 Government of India Act (Montagu-Chelmsford Reforms) and the 1935 Government of India Act. The 1919 and 1935 reforms were more significant in increasing the administrative powers of local government. Prior to 1919, the provincial government constituted a unicameral legislature. The legislature operated as a board of governors and the British government appointed members to the Madras Legislative Council. The reforms in 1919 created a quota for elected members, from local political parties, on the Council. The first Council elections took place in 1920. The 1935 reforms created bicameral legislatures in the provinces. The Madras Legislative Assembly was the lower house and constituted elected members from local political parties. The government ran the first Provincial Legislative Assembly Election in 1937. The Legislative Council remained and formed the upper house.

Two political parties, the Justice Party and the Indian National Congress, competed for elected positions in the provincial legislature during the colonial period. Both parties put forward different profiles, ran dissimilar campaigns and sought distinctive mandates between 1920 and 1937. The Justice Party was founded in 1916 and ran campaigns to diminish caste prejudices in local government. The party aimed to disconnect from broader nationalist campaigns in a bid to draw attention to Tamil- and Telugu-specific interests and to detach from its perception of the Congress' nationalist campaign as a proponent of upper caste, Brahmin interests.[336] The Justice Party won the majority of seats reserved for local parties in the Council from 1920 to 1937. *Zamindars* and landowners dominated the leadership of the Justice Party which invited criticism and claims of hypocrisy in the contradiction between its anti-prejudice campaign and its ignorance of peasant interests in the early 1930s. The Indian National Congress extended its *Swaraj* or Indian self-rule promotion to its campaign expansion in Madras. In the 1920s and 1930s, the party extended its campaign to increase nationalist sentiment in the south by promoting the synonymity between colonial rule and the vested interests of elite landowners. In doing so, Congress leaders claimed the leaders of the Justice Party supported the aims of colonial rulers. From the early-1930s, Congress leaders established a large support base in rural districts by promoting tenancy reforms

[336] See Eugene F Irschick, *Politics and Social Conflict in South India : The Non-Brahman Movement and Tamil Separatism, 1916-1929*, (Berkeley, 1969); Christopher John Baker, *The Politics of South India 1920–1937*, (Cambridge, 1976); David A Washbrook,, *The Emergence of Provincial Politics : The Madras Presidency, 1870-1920*, (Cambridge, 1976); Pamela G Price, "Ideology and Ethnicity under British Imperial Rule: 'Brahmans', Lawyers and Kin-Caste Rules in Madras Presidency." *Modern Asian Studies* 23, no. 1 (1989): 151-77.

and debt relief laws in a larger campaign to rid the province of colonial rulers.[337] The party legitimised itself as a representative of peasant interests in the fight against the British and their landowner allies. Following the 1935 Government of India reforms, the Indian National Congress party won the majority of seats in the Assembly elections in 1937. The Congress won 159 out of the contested 215 seats in the Legislative Assembly.

The focus on reducing economic inequality in villages cut across party lines, to some extent. A speech delivered by K V Reddy Naidu, a member of the Justice Party in 1924, emphasised the dangers of colonial forms of property rights, 'The English and Scotch land systems were based upon the Roman conception of Dominium. According to these systems, the landlord is the absolute owner of the soil. The tenant has no proprietary interest in it, and has no rights whatsoever.'[338] P J Thomas, a member of the Indian National Congress, echoed the need for dual intervention in land and credit markets. Prior to winning a seat in the Madras Legislative Assembly Election in 1937, Thomas argued,

> The Indian Banking Committee points out that where the moneylenders are mostly landholders (chiefly in the Punjab and Madras), changes in the ownership of land are not detrimental to agricultural efficiency, but this is a highly questionable view, seeing that such transfers lead to the increase in tenants and tenant-farming, which is not desirable in many ways.[339]

In Reddy Naidu's and Thomas' view, the exploitation of peasants persisted through inequities in factor markets. The view, agreed by members of the different political parties, concluded that landowners extracted from permanent tenants through their control on the supply of credit. The Congress party, however, enforced stronger borrower protection measures after their electoral victory in 1937. Indeed, Washbrook's study of provincial politics demonstrates that voters considered the Justice Party more elite-favouring than the Indian National Congress. According to Washbrook, the Justice Party lost favour in the rural districts during the 1920s and 1930s. Rural voters believed that the Congress would implement policies that were not elite-favouring.[340] The protection of borrowers against rich moneylenders was one example of this policy approach.

The federal government and the Justice Party-controlled provincial legislature regulated credit markets but with limited impact on protecting borrowers. The colonial headquarters in Delhi

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[337] Washbrook, "Country Politics"; Christopher John Baker, "The Congress at the 1937 Elections in Madras." *Modern Asian Studies* 10, no. 4 (1976): 557-89.

[338] K Venkata Reddy Naidu, *Presidential Address*, The Second Malabar Tenant's Conference, 1924.

[339] Thomas, P J, *The Problem of Rural Indebtedness*, (Madras, 1934), 13.

[340] Washbrook, "Country Politics".

introduced an interest rate ceiling in the early-twentieth century, but designed this policy to reinforce the terms in nineteenth century contract laws. The 1918 Usurious Loans Act instructed judges, across colonial India, to cap interest rates on agricultural loans at 18 per cent per annum. This initially challenged Section 79 but sustained the position recorded in Section 80 of the NIA. The federal government had changed their tune, only marginally, to the preservation of contract laws. After 1918, judges upheld promissory notes in courts as long as they defined an interest rate lower or equal to 18 per cent per annum. Moneylenders did not dispute the Usurious Loans Act as they continued to benefit from pricing flexibility. Section 80 of the NIA allowed moneylenders to increase interest rates, up to 18 per cent, to compensate for the costs of contract enforcement. Indeed, the preservation of Section 80 of the NIA ensured that promissory notes continued to be a popular legal instrument in the rural credit market in the early 1930s. However, usury laws enforced by the provincial government in the 1930s complicated this arrangement.

Government reports advocated for credit intervention in the early 1930s. The Provincial Banking Enquiry Committee in 1930 and the Report on Agricultural Indebtedness in 1935 recommended new policy measures to protect borrowers from credit exploitation. The first in a series of legislative measures by the Madras provincial government was the 1936 Debtors Protection Act. C Basudev, a member of the Justice Party-controlled legislature, introduced the Debtors Protection Bill in 1932. The Bill underwent several revisions and, when enacted, eventually enforced an interest rate ceiling of 9 per cent on secured and 15 per cent on unsecured loans.[341] The Debtors Protection Act also recommended that lenders present courts with ledgers and more formal accounting methods in credit disputes.[342] The law only regulated loans below 500 rupees.

Following this, the government introduced the 1936 Debt Conciliation Act. This watered-down law constituted a board of judges in the Madras High Court to 'amicably' resolve disputed loans with values above 100 rupees.[343] The Conciliation Act recommended the existing interest rate ceiling and limited the total repayment of loans to double the initial principal loaned. This reinforced the ancient Hindu law of *Damdupat*.[344] First located in the Hindu *Manusmrti* texts, the

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341 Manikumar, *A Colonial Economy*, 150-152.

342 *Rural Problems in Madras: Monograph*, (Madras, 1947), 370-375.

343 *Rural Problems in Madras: Monograph*, (Madras, 1947), 370-375.

344 The law of *Damdupat* dictated that repayments are not to exceed double of the initial principal loaned. *Damdupat* regulation was recommended in a Bill that was eventually rejected in the early nineteenth century. A vocal opponent of this Bill was Jeremy Bentham, who wrote of expected problems when enforcing a ceiling on interest rates. Bentham's argument highlighted the potential ways for lenders to deceive borrowers and law enforcement. Bentham emphasized the incentive for lenders to charge higher rates of interest by inflating the loan principal in contracts. See Jeremy Bentham, "ART. VII.-USURY LAWS." *Calcutta Review* 101, no. 201 (1895), 163-164.

law was enforced to protect against the practice of usury and exploitative interest rates.[345] By placing a cap on the total value of repayment, the government believed it limited any scope for borrower exploitation. However, the law did not empower judges on the Debt Conciliation Boards to execute changes to contracts or previously agreed credit arrangements. Debt Conciliation Boards dismissed cases with suggested remedies that were not legally enforceable. In practice, creditors did not implement the changes recommended by the Debt Conciliation Boards. Recognizing the law's failure to have the desired impact, the Congress-led provincial government dissolved Debt Conciliation Boards in 1942.[346]

The Indian National Congress' electoral victory in 1937 encouraged policymakers to act more strongly on their appeal towards the protection of peasant cultivators from exploitation, particularly rent-extraction through predatory credit pricing. Following the Congress' landslide victory, the government implemented a Moratorium Bill in September 1937. The law banned creditors from suing indebted cultivators for one year. T S S Rajan, a member of the Congress party and Minister for Public Health in the provincial Assembly, went further to carry out the party's campaign promise to aggressively intervene and protect poor borrowers in credit markets. Rajan introduced the Debt Relief Bill in December 1937. The Bill carried stronger market intervention than the policies before. When introducing the Bill in the Assembly, Rajan stated,

> Now we have been returned by a large number of voters many of whom are pre-eminently agriculturists and to whom we have given the word of honour and to keep the word of honour we put before the two Houses of legislature this Bill which is intended to relieve the agriculturists of his debts.[347]

The Bill progressed and the Congress-led government eventually enforced the landmark Madras Agriculturists Relief Act (MARA) in September 1938. The primary objective of the MARA was to regulate compounding unproductive debts accumulated during and immediately after the Depression. The provincial government believed that amicable and voluntary settlements, such as those encouraged by the Debtors Protection Act, did not go far enough. Stronger intervention was needed to see results in the market. The MARA empowered judges to not just recommend fair credit terms but to discipline moneylenders and strongly enforce credit regulations in order to protect borrowers.

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[345] For the history of *Damdupat* legislation, see Mandar Oak and Anand Swamy, "Only Twice as Much: A Rule for Regulating Lenders." *Economic Development and Cultural Change* 58, no. 4 (2010): 775-803.

[346] *Rural Problems in Madras: Monograph*, (Madras, 1947), 370-375.

[347] *Madras Legislative Assembly Debates Vol I,* (Madras, 1937).

The MARA placed a ceiling on loans to cultivators and implemented provisions for loans borrowed during and after the Depression period. When designing the law, the government deliberated how best to arrive at a ceiling price. The government decided to enforce an interest rate ceiling that was marginally above the rate at which local government borrowed but below the rate at which cooperative banks were lending. Pricing below the rate charged by cooperative banks was strategic. The fear, according to government officials, was that moneylenders could borrow at low rates from cooperatives and charge a higher rate for their clients.[348] In doing so, moneylenders could crowd-out the credit market for poor peasants. The government arrived at the rate of six per cent per annum, marginally above the five per cent that local government borrowed and below the rates that cooperatives charged in the same period.[349] The Congress Party then increased the rate to 6.25 per cent per annum.[350] They believed this rate was easier to calculate as it translated, in currency terms, to one pie per rupee borrowed.[351] The law also distinguished between debts undertaken before and after 1 October 1932. The government enforced different ceilings to account for deflationary pressures during the Depression. The MARA enforced a ceiling of 5 per cent annual interest on all loans undertaken between 1932 and the implementation of the Act in 1938. In a bid to cement the *Damdupat* rule, the law wrote off partially repaid debts if the amount repaid matched double the initial principal loaned. The government enforced the *Damdupat* rule to moderate the size of compounding interest following multiple defaults. The government administered the MARA through the judiciary. The law empowered court judges to intervene in credit disputes where interest rates charged exceeded the ceiling declared in the law.

Congress party-led intervention in the late 1930s invited criticism from political opposition and some provincial lobbyists. Views opposing intervention are reflected in debates within the provincial Legislature following the introduction of the Madras Agriculturists Relief Bill in 1937. Opponents to this form of agrarian intervention can be placed in two groups. The first group consisted of landowners ideologically resisting policy shift to an interventionist left. This group argued against the benefits of the MARA. Landowners disagreed with the view that tenant cultivators were victim to forms of credit exploitation. The officials that echoed this view in the Assembly advocated for less radical legislation on the grounds that landowners showed leniency to rent defaulters. Supporters of this position disagreed with any existence of exploitation as they

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[348] Kodaganallur Ganapattri Sivaswamy, *Legislative Protection and Relief of Agriculturist Debtors in India*, (Poona, 1939), 204-205.

[349] Cooperatives charged rates above 7 per cent. Chapter 5 discusses cooperatives in greater detail.

[350] Section 12, Madras Agriculturists Relief Act 1938.

[351] Pie was the smallest currency unit in colonial India.

believed that landowners had a 'hereditary love for their tenantry.'[352] In opposition to laws that protected peasants C Muttukumaraswami Mudaliyar, a landowner and *zamindar* in the Chunampet village, opposed the Debt Relief Bill on the grounds that it unfairly defined the interests of a group of rural landowners in the province. According to Mudaliyar,

> There is an assumption pervading the Bill all through that the interests of the *zamidnars* and those of the tenants are antagonistic, that the *zamindar* is ever bent upon encroaching upon the rights of the tenants and unless the rights of the tenants are buttressed by all the safeguards which the legislature can devise, they will be annihilated by the insatiable ambition and cruel exactions of the *zamindar*. It is very much to be regretted that this feeling of distrust is unjustly entertained towards the *zamindars* as a class.[353]

The second group consisted of pro-market enthusiasts. This group was concerned about the future legislative capacity of government. The elections in 1937 formed the first legislative assembly in Madras with a more robust mandate given to local political parties than before. In this context, pro-market officials considered the Relief Bill a move towards socialist intervention. This opposing group, led primarily by members from the Justice Party, pointed to the conflict between debt relief and the nineteenth century laws that protected the freedom of contract. Reddi Nayudu, for example, echoed this hesitation by stating that, 'The Bill treats the sanctity of contracts with contempt….there are large amounts of debts on promissory notes and the contention has been raised, and I believe there is a good deal of force in that contention.'[354] Members of the ruling administration also recognized the potential contradiction of federal contract laws. Rajan, who introduced the Relief Bill, acknowledged the infringement of borrower protection on the freedom of contract. During an eight-hour debate among legislators on the Relief Bill, Rajan conceded that the law might conflict with an adapted institutional structure supporting free enterprise. According to Rajan,

> As regards sanctity of contracts, this question has been discussed threadbare. I am not speaking as a lawyer but I am going to speak as an ordinary citizen and I know certainly the obligations of a contract. That a man who has borrowed has got to pay back what he has borrowed is a fundamental law which even the meanest of our citizens does understand and which even the most ignorant citizen will not repudiate.[355]

352 *Madras Legislative Debates.*

353 *Madras Legislative Debates.*

354 *Madras Legislative Debates.*

355 *Madras Legislative Debates.*

However, the debate was won by interventionists. Key members of the Congress believed more strongly in the backlash to market exploitation than in supporting free enterprise. Naidu and Vaidyanathan, economists and members of the provincial legislature in the Congress government, criticised the pro-contract stance. According to them, contract laws protected moneylenders at the expense of the borrowers. Moneylenders used contracts, and the judicial protection contracts carried, to exploit poor peasants in rural credit. Naidu and Vaidyanathan argued in 1939,

> A revision of contract with every change in the volume of money is necessary. Even nations were obliged to violate contracts entered into when, owing to various economic causes, they were unable to respect such obligations. What is true of nations is true of individuals also. After all, men are responsible for these contracts and when these contracts threaten the economic position of the individuals, it is but right that these contracts should be abrogated.

C Rajagopalachariar, leader of the Congress government in the 1930s and later President of independent India, supported the pro-borrower stance and believed that market intervention was more important than the protection of contract laws. Commenting on the Relief Bill, Rajagopalachariar claimed, 'it was said that one of the main attacks on this Bill was that this is introducing communism or revolution; let us not put the thin end of revolution in a thing like this because it is a dangerous thing.'[356] Responding to wider regional criticisms over credit intervention across provinces, Rajagopalachariar believed that 'credit will not be lost. The scare will disappear and the country will have the previous industry standing on its own legs.'[357] Rajagopalachariar recognised the dangers of regulation affecting the supply of credit but predicted that the market would return to its original state following an initial shock.

Other left-leaning politicians, and members of the Congress party in the colonial period, supported the government's approach. Despite the recognition that lenders could withhold credit as market monopolists, some legislators believed that laws in the joint spheres of land and credit was a solution to the trade-off between efficiency and equity. Sivaswamy, a member of the Legislative Council and later member of the Socialist Party in post-colonial Madras, praised the Congress government's credit intervention. Sivaswamy claimed the intervention was a success for regulating exploitation without noticeable consequences on credit provision.[358] According to Sivaswamy, the strengthening of property titles in the early twentieth century provided sufficient incentives for creditors to lend despite restrictions on interest rates. In other words, Sivaswamy

[356] *Madras Legislative Debates.*

[357] *Madras Legislative Debates.*

[358] Sivaswamy, *Legislative Protection*, 97-102.

expected stronger property rights to mitigate default risk through collateral requirements hence avoiding a backlash to the regulation of interest rates.

Did intervention restrict the supply of credit in Madras? Was the credit market more equitable in the short term? These are the central questions dismissed by policymakers in late 1930s Madras. The chapter tackles these questions and shows that the design of intervention made regulated moneylending unprofitable. The credit market contracted and moneylenders evaded the law in the short term.

4.3 Intervention and The Mortgage Market

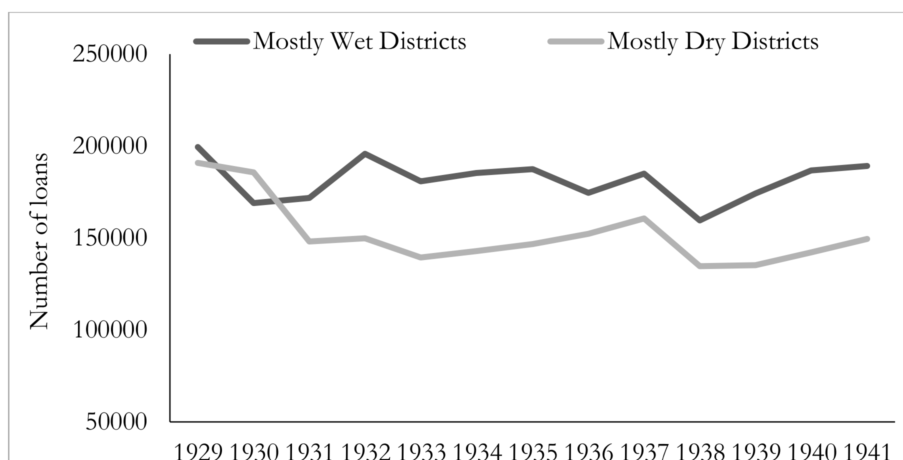
Recovery from the Depression began in the mid-1930s. Commodity prices and the number of mortgage loans increased from 1934. However, the mortgage market was exposed to a second shock in the form of state intervention. Moneylenders faced three choices following the intervention. First, lenders adhered to the law and continued to provide credit that met the legally imposed conditions. Annual changes in the supply of credit would continue to respond to prices under this regime. Second, lenders rejected the law and stopped lending to peasants. Commodity prices would have limited bearing on the supply of mortgage credit under this regime. Third, lenders evaded the law and continued to provide credit on the same terms as the pre-regulated market. Evidence shows that the market contracted and the remaining lenders seemed to have evaded the law entirely.

Mortgage lending did not respond to the upward swing in prices in the late 1930s. McAlpin's commodity price index indicates a 28 per cent increase in commodity prices between 1934 and 1941. An official report commissioned by the provincial government estimated an increase in the prices of rice, cotton and groundnut by 2.2, 2.3 and 4.8 times between 1939 and 1944.[359] However, the number of mortgage loans, in wet and dry districts combined, in 1941 was 10 per cent lower than the same number in 1930. The steepest decline in the annual number of mortgages was between 1937 and 1938, coinciding with the enforcement of the Madras Agriculturists Relief Act. The number of mortgage loans in wet districts declined by 14 per cent between 1937 and 1938. The same number declined by 16 per cent in dry districts. Figure 4.2 shows that the increase in commodity prices did not reflect in the expected increase in mortgage lending. Adjusting for inflation, the value of mortgage loans experienced a steep decline between 1935 and 1941. The real value of loans in dry districts declined by 33 per cent between 1934 and 1939. The real value

[359] *Report of the Economist,* 47.

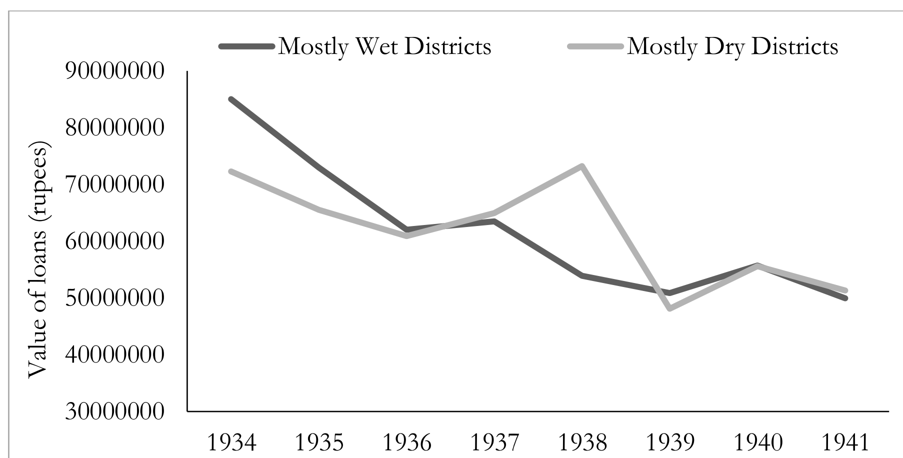
of loans in wet districts declined by 40 per cent between 1934 and 1939. The Registration department in the provincial government attributed this decline to credit intervention. Explaining the causes of the decline in mortgage lending, the department's annual report in 1938 suggested that, 'the fall is attributed to the reluctance of the moneyed class of people to advance loans consequent on the operations of the Madras Agriculturists Relief Act 1938.'[360]

Figure 4.1 Number of mortgage loans, 1929-1941



Source: *Report on the Administration of the Registration Department, 1929-1941*.
Notes: The data estimates the number of mortgages registered in a given year. The Registration Department in the government set up offices in the districts to register land transfers. Each district had at least one Registration office. The source provides data from each Registration office. Data aggregated by the author. Division between 'Mostly Wet' and 'Mostly Dry' conducted in the same format as Table 2.3 in Chapter 2. The graph excludes the South Kanara, Malabar and Nilgiris districts.

Figure 4.2 Real value of mortgage loans, 1934-1941



Source: *Report on the Administration of the Registration Department 1934-1941*; McAlpin, 'Price Movements''.
Notes: The data estimates the nominal value of mortgage loans registered in a given year. The author deflates this data using McAlpin's commodity price index. Analysis of the data conducted in the same format as Figure 4.1.

360 *Report on the Administration of the Registration Department 1938.*

Due to gaps in source material, it is difficult to predict the duration of this supply-side shock. Land registration records from the early 1940s are unavailable. However, data from 1947 suggests that the diminishing trend persisted. The number of mortgage loans in wet districts declined by 13 per cent between 1941 and 1947. The number of loans in the dry districts declined by 10 per cent in the same period. The real value of mortgage loans also declined between 1941 and 1947. The value of mortgage loans was 40 per cent lower in both wet and dry districts.[361] How did credit intervention affect the settlement of old debts?

One impact of intervention was an increase in the number and value of land sales across Madras. The number of land sales increased consistently between 1935 and 1941, with a particularly large rise after 1938. The number of sales in 1941 was 12 per cent higher than the number of sales in 1929 and 15 per cent higher than the same in 1934. Officials in charge of land registrations recognized the juxtaposition in declining mortgages and rising sales. According to a report from the Registration Department in 1940, the mortgage market saturated while the 'rise in the number of sales' was 'due to the Madras Debt Conciliation Act, 1936, and the Madras Agriculturists Relief Act, 1938.'[362] The number of sales rose because the MARA encouraged creditors with overdue loans to recover these in one-time settlements in courts and cultivators with disposable income invested in land purchase rather than in the credit market.

Courts ordered the transfer of land where borrowers were unable to repay loans under the interest rates specified in the MARA. As protection for the lender, rules in the MARA allowed one-time settlements for previously unpaid loans. The MARA did not contain provisions for the repayment of loans in instalments. While interest rates were capped and loan sizes re-configured by judges, the law expected swift rather than drawn out settlements. Under these conditions, judges ordered debtors, without the capacity to repay their scaled-down debts, to transfer land to lenders as a method of repayment.[363] Section 7 of the MARA allowed for land sales as long as the quantity of land transferred matched the value of the reconfigured, discharged loan.[364] This design changed the incentive structure for lenders in the short term. Whereas lenders in the pre-regulated market commonly extended defaulted loans or agreed instalments out of court, the MARA encouraged creditors to recover defaulted loans through land sales. The Registration Department attributed

[361] *Report on the Administration of the Registration Department 1947*.

[362] *Report on the Administration of the Registration Department 1940*.

[363] Naidu and Vaidyanathan, *The Madras Agriculturists Relief Act*, 21-22.

[364] Courts determined the value of a plot of land by extrapolating from the net annual value of tax assessed on said plot.

the rise in the number of new land registrations in the Coimbatore district after the MARA to the, 'disposal of immovable properties by sale for discharging the debts.'[365]

In these settlements, the courts favoured creditors as long as the value of the sale matched the value of the unpaid loan. The judgement in the 1943 case *Kruttiventi Mallikharjuna Rao and ors. Vs. Vemuri Pardhasaradhirao and anr* is proof of this. In this dispute, the lender provided the borrower a mortgage loan of 1500 rupees at 12 per cent interest per annum in 1927. The borrower repeatedly defaulted on the loan until it compounded to 3400 rupees in 1934. Both parties then agreed to an oral contract, in which the borrower would sell the mortgaged land to the creditor for the value of the defaulted loan. A written contract was not drawn up. The creditor took possession of the property in 1935, leased a part of it and cultivated the rest. In the early 1940s, the borrower petitioned the courts to reverse the sale. The appeal in the Madras High Court claimed that the creditor earned the value of the loan in the rents and cultivation profits made since the transfer. The borrower arrived at this conclusion after deducting the size of the loan to fit the parameters in the MARA. As written sale deeds did not accompany the original transfer, the borrower claimed the transaction was still a mortgage and since the debt was repaid, the property could return to the original owner. Judges in the High Court ruled in favour of the creditor, stating that the sale in 1934 was a settlement offer for the repayment of unpaid loans. A sale deed was drawn up and the creditor took formal possession of the property.[366]

Problems occurred when creditors attempted to use the sale arrangement to inflate the value of the unpaid loan. When the courts were able to identify this, judges placed injunctions on the sale until they arrived at the appropriate figure, accounting for debt reductions from the MARA. In the 1938 case, *P.R. Govindaswami Naicker Vs. C. Javanmull Sowcar and anr*, for example, judges found that the creditor was, 'about to recover by the sale of the debtor's property, mortgages to him the full amount of the debt, that is to say, without deducting the amount by which it has become reduced by the operation of the Agriculturists Relief Act.'[367] The judges placed a temporary injunction on the sale. The potential for moneylenders to disguise sales as inflated loan repayments and the rise in sales following intervention indicates an important difference between the impact of credit laws in Madras versus other Indian provinces. Indeed, Chaudhary and Swamy's study of land restrictions and credit in Punjab suggests that the number of sales declined at a similar rate as the number of mortgages in the short term. In their view, land alienation policies in Punjab applied

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[365] *Report on the Administration of the Registration Department 1941,* 2.

[366] Kruttiventi Mallikharjuna Rao and ors. Vs. Vemuri Pardhasaradhirao and anr. (1943 2 MLJ 584, Madras, 12 October 1943).

[367] P.R. Govindaswami Naicker Vs. C. Javanmull Sowcar and anr. (1938 2 MLJ 918, Madras, 21 May 1938).

to sales as well as mortgages, therefore explaining the immediate decline in both markets.[368] In this context, the government's encouragement of sales in Madras provides a unique outcome of intervention, in which creditors settled unpaid debts without committing to the interest rate restrictions.

Creditors' ability to mask inflated loan repayments as land sales and borrowers' ability to injunct or reverse transfers and repayments caused confusion in the courts. Judges questioned whether to challenge the value of the sale on the borrower's behalf or protect the moneylender and allow the sale as a means of ensuring the repayment of loans. In one case, judges reduced the repayment amount but ruled in favour of the sale, suggesting the MARA did not apply to agreed debt settlements before 1 September 1937.[369] In another, the creditor and borrower agreed to sale as a settlement of unpaid debts before 1937 but judges cited the MARA and stopped the sale to ensure the value of the sale matched the value of the loan with the imposed interest rate ceiling.[370] On the MARA causing confusion in courts, the judge in the latter case remarked,

> I must remark that contentions like the one advanced are rendered possible by the language of the various provisions of the Act. The Act is one of the most ill-drafted enactments now existing on the statute book. Every section bristles with difficulties and it is no wonder that the Act has become a fruitful source of litigation.[371]

The next section of this chapter considers similar such areas of confusion, focusing on legal disputes that highlighted contradictions between MARA and contract laws.

The rise in sales was not only because of the encouragement from the law and courts. Following intervention, cultivators invested their disposable income in land purchase rather than moneylending.[372] On the nature of land and credit substitution after intervention, Naidu and Vaidyanathan suggested that, 'money lenders will begin to hoard or buy lands. When the investor becomes a burnt cat, it will take a long time for him to recoup and one cannot expect the money lender to lend easily to the agriculturists in the near future.'[373] Whether it is because creditors are settling old debts or avoiding the provision of new mortgage loans, the rise in sales demonstrates that lending contracted following the MARA.

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[368] Chaudhary and Swamy, "A Policy of Credit Disruption", 4.

[369] B.K. Narayanaswami Chettiar Vs. Gurukkar Rudrappa and anr. (1943, Madras, 26 November 1943).

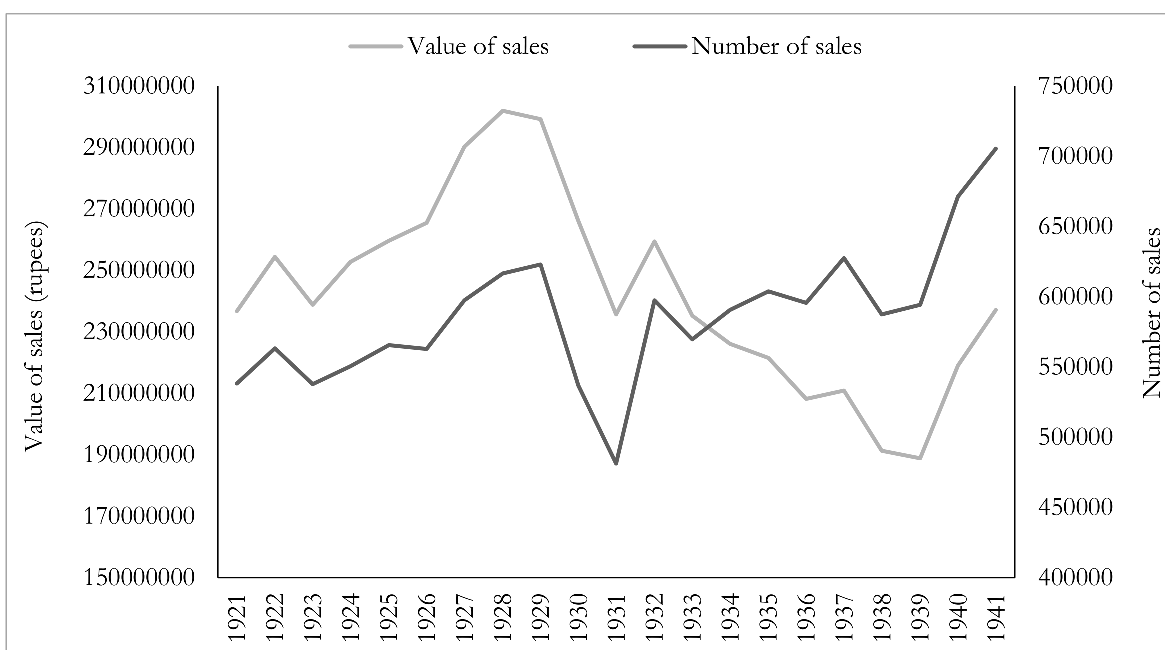
[370] V. Sreenivasachariar and anr. Vs. Krishniah Chetty and ors. (1939, 1 MLJ 860, Madras, 04 September 1939)

[371] V. Sreenivasachariar and anr. Vs. Krishniah Chetty and ors. (1939, 1 MLJ 860, Madras, 04 September 1939)

[372] This trend continued in the early 1940s as investors found land a safe investment in wartime. See *Report on the Administration of the Registration Department 1947*.

[373] Naidu and Vaidyanathan, *The Madras Agriculturists Relief Act*, 25.

Figure 4.3 Number and nominal value of land sales, 1921-1941



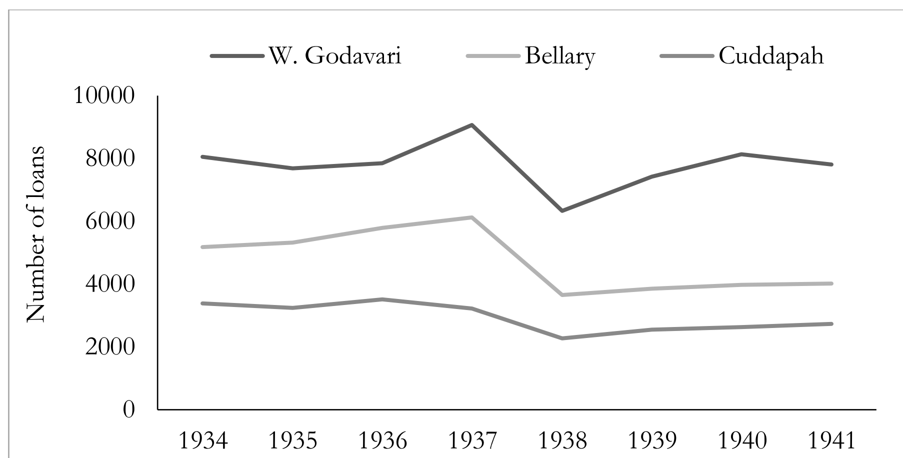
Source: *Report on the Administration of the Registration Department 1921-1941*.
Notes: The source estimates the number and value of land sales registered in each district in a given year. Aggregations made by the author. The graph excludes data from the Malabar district.

The relationship between the number and value of transactions requires some clarification. The number of sales increased earlier and at a much quicker rate than the value of sales. The same is true of mortgages. Whereas the number of mortgages either stagnated or saw a partial increase in the early 1940s, the nominal value of mortgages declined. This could suggest that declining land prices are skewing the data for the decline in mortgages. However, a closer comparison between mortgages and sales eases this concern. Land sales increased rapidly in the mid-1930s while mortgages stagnated below pre-Depression levels. Moreover, the nominal value of sales increased while the nominal value of mortgages declined from 1937. Therefore, low land prices are not driving the results in the graphs above. The data demonstrates that mortgages declined and sales increased concurrently.

The decline in mortgage credit was evident across districts. This is reflected in a study of mortgages and sales in three districts: Bellary, Cuddapah and West Godavari. These districts provide a representative sample owing to the distinct features in each. West Godavari was a naturally irrigated, primarily rice producing region. Bellary and Cuddapah were dry regions, primarily producing cereals. Bellary, with black soil in some areas, produced cotton while Cuddapah endured poor irrigation and low-quality soil. The land tenure system across the majority of the acreage in each district was *ryotwari* or government-cultivator. As such, the data is not affected by inconsistencies in land titles within and across the sample districts. Following credit

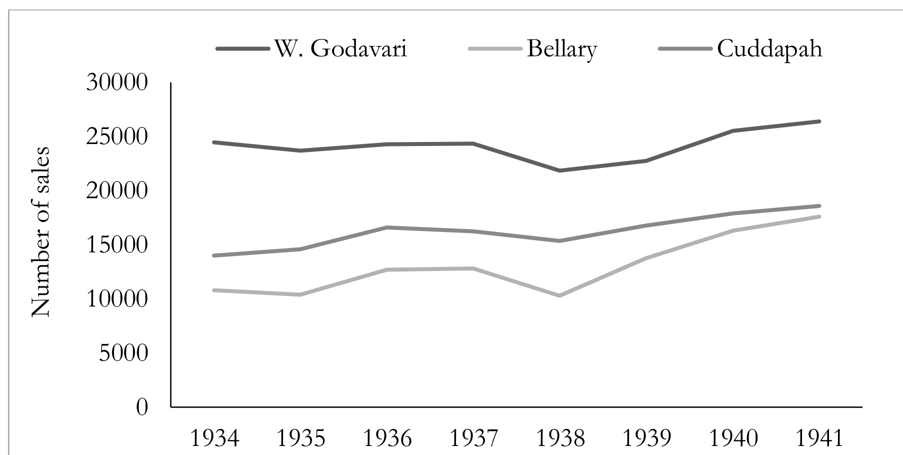
policies, the number of mortgages declined sharply and stagnated in the short-term thereafter. This occurred despite rising prices and crisis recovery. The number of sales increased following intervention, and continued to rise in the short-term. Comparing Figures 4.4 and 4.5, mortgages and sales showed opposing temporal trends in the late 1930s. The value of mortgages saw a larger decline than the number of mortgages. The value of mortgage loans declined by 30 per cent in West Godavari and 40 per cent in Bellary between 1937 and 1938.[374]

Figure 4.4 Number of mortgages in 3 districts, 1934-1941



Source: Report on the Administration of the Registration Department 1934-1941.
Notes: Data estimates the number of mortgages registered in the select district's land registration office.

Figure 4.5 Number of land sales in 3 districts, 1934-1941



Source: *Report on the Administration of the Registration Department 1934-1941.*
Notes: Data estimates the number of land sales registered in the select district's land registration offices.

In short, this section suggests that the mortgage market contracted after the MARA. Though sale instruments as court settlements for unpaid debts and the rise in commodity prices allowed

[374] *Report on the Administration of the Registration Department 1938*, 3.

creditors to recover overdue loans, evidence shows that intervention contracted the mortgage market in the short-term. Debt settlements increased while creditors attempted to skirt the law by acquiring lands worth more than the size of the loan, while the provision of new mortgage loans declined. The previous chapter shows that new loans were commonly unsecured in the rural credit market. Lenders commonly executed debt instruments, including mortgages, only following initial defaults. The chapter now turns to transitions in the supply of unsecured and contracted loans to fully analyse the impact of intervention on the credit market.

4.4 Intervention and Promissory Notes

The interest rate ceiling enforced in the 1930s generated two administrative threats to nineteenth century contract laws. First, credit laws conflicted with the 1872 India Contract Act and the 1881 Negotiable Instruments Act, and questioned the legitimacy of promissory notes as contracts. Second, credit laws blurred the boundaries between the provincial assembly and the federal legislature. Policymakers questioned whether the enforcement of interest rate ceilings was *ultra vires* of the provincial legislature. Though the federal government delegated some policymaking powers to the provinces, contract laws remained a federal concern.[375] Opposition to borrower protection claimed the MARA affected the use of contracts and was thus *ultra vires* of the provincial legislature.

Moneylenders challenged the legality of credit laws in lower courts, with appeals eventually leading to the Madras High Court. Following the enforcement of the MARA, one moneylender initiated a dispute against the provincial government in a lower district court, questioning the conflict between laws protecting the freedom of contract and laws protecting borrowers. The judge invalidated the MARA on grounds of its conflict with prior contract laws. According to the final judgement issued on 19 September 1938,

> Considering the relevant sections of the Government of India Act 1935 together with the legislation in respect of promissory notes and bills of exchange under the Negotiable Instruments Act, it seems to me clear that the promissory note is a subject matter which is outside the province of the legislative powers of the provincial legislature and therefore it is we do not find any mention of promissory notes or other documents representing notes while we find the word 'debt' alone in the Act IV of 1938. The question is whether 'debt' coming within that definition of the act will cover a debt under a promissory note or any negotiable instruments and upon this point there can be no doubt that all debts affected by the provisions of Act IV of 1938 of the Madras Provincial Legislature cannot comprise the

[375] Naidu and Vaidyanathan, *Madras Agriculturists Relief Act*, 22-23.

> debts due under a promissory note or other negotiable instrument coming under the provisions of the Negotiable Instruments Act.[376]

The district court judge restricted the policy scope of the MARA by ruling that changes to contract laws were outside the legislative scope of provincial government. Following the decentralisation of policy making in 1919 and the Government of India Act in 1935, a Concurrent Legislative List determined the scope of law making for federal and provincial governments.[377] The provincial legislative list included agricultural credit, while federal government was responsible for changes to contract laws. As such, the court ruling did not invalidate the MARA but it did allow promissory notes to operate outside the scope of the MARA. According to the judge, the vague wording of provisions in the MARA left room for misinterpretation. The law did not explicitly mention 'promissory note' and instead broadly defined the scope of regulation as 'debt'. The judge interpreted this to include unsecured, non-contracted credit transactions. The ruling declared that credit transactions ratified by contracts were regulated by nineteenth century contract laws and not targeted policies in the 1930s. The lower court restricted the scope of the interest rate ceiling to loans without promissory notes. The judgement, therefore, reinforced the freedom of contract by stressing failure in the design of MARA in its lack of consideration for the frequent use of promissory notes in rural credit.[378]

In fear of watered-down credit regulation, district court judges appealed the decision to remove promissory notes from the scope of the MARA in the Madras High Court. Judges from three regional courts, the District *Munsiff* in Guntur, the District *Munsiff* in Cuddalore, and a Subordinate Judge in Coconada, collectively referred to a High Court Bench to revisit the legal capacity of the MARA. Writing in the six-month period between the lower court's verdict and the final decision in the High Court, Naidu and Vaidyanathan stated that, 'if the Act is held not to apply to negotiable instruments the relief to agriculturists becomes so small as to make the Act practically a dead letter….Everything depends on the decision of the High Court which is keenly awaited by many debtors and creditors.'[379]

The High Court's decision, issued on 7 February 1939 in the landmark case *Mada Nagaratnam Vs. Puvvada Seshayya,* repealed the previous judgement on the scope of borrower protection. The

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[376] Naidu and Vaidyanathan, *Madras Agriculturists Relief Act*, 22-23.

[377] Mada Nagaratnam Vs. Puvvada Seshayya and Anr, (1939, IMLJ 272, Madras, 7 February 1939). Section 100 of the Government of India Act defined the areas of legislation devolved to federal and provincial legislatures.

[378] An eventual reversal of this initial judicial response constrains our ability to accurately predict the counter-factual history of the role of promissory notes in the credit market. However, considering the incentives that justified its use prior to the MARA, the chapter postulates a continued use of contract in the event of its exclusion from usury laws.

[379] Naidu and Vaidyanathan, *Madras Agriculturists Relief Act*, 22-23.

case was heard by a bench of three judges and the final judgement was issued by the Chief Justice of the Madras High Court, Alfred Lionel Leach.[380] Leach overturned the lower court's verdict by declaring the MARA as compatible with prior contract laws. Invalidating the respondent's argument on the legal protection of contracted debts by the 1881 Negotiable Instruments Act, the High Court Bench summarised their judgment as,

> Negotiation of a promissory note is not prohibited nor is it said that a maker or an endorser shall not be liable. The only effect of the Madras Agriculturists Relief Act so far as Negotiable Instruments are concerned is to reduce liability where the maker or endorser is an agriculturist.[381]

The High Court sought to maximise the scope of the MARA. Judges took a clear position on the role of contract relative to usury laws. In the conflict between contract laws and borrower protection, courts prioritised the latter. The High Court Bench predicted that the MARA would have an insignificant impact if contracts were excluded from its scope. According to Leach, excluding promissory notes would render the Act inconsequential given, 'the practice of lending money on promissory notes being so widespread.'[382] Leach enforced the Act with the recognition that the protection of borrowers would have little effect had promissory notes been excluded from intervention. In adopting this position, the Madras High Court legitimised the increased policy sphere of the provincial legislature. Judges disagreed with the respondent's petition that the MARA allowed the provincial government to interfere in a policy space outside its jurisdiction. The judiciary granted the provincial government powers to implement debt relief measures without concern for its impact on the role of contract.

Despite attempts to challenge the MARA, the judiciary sustained the decision made by the Madras High Court in 1939, until the Act was eventually amended in 1976. The case of *Subramaniam Chettiar Vs. Muthuswami Goundan* appealed against the 1939 verdict by questioning the validity of the MARA in reference to its conflict with legislative authority. The appellants approached the Federal Court in 1940 to question the validity of the MARA given that the federal government, according to the Government of India Act in 1935, held the powers to make amendments to contracts laws. The Federal Court admitted the case, however, the provincial courts in Madras could enforce the interest rate ceiling while the case proceeded. Federal court

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[380] Alfred Henry Lionel Leach qualified as a British barrister in 1907. Leach spent the majority of the 1930s and 1940s in South Asia, first as a judge in the Rangoon High Court in Burma, and then the Chief Justice of the Madras High Court from 1937 to 1947.

[381] Mada Nagaratnam Vs. Puvvada Seshayya and Anr, (1939, IMLJ 272, Madras, 7 February 1939).

[382] Mada Nagaratnam Vs. Puvvada Seshayya and Anr, (1939, IMLJ 272, Madras, 7 February 1939).

judges dealt specifically with the scope of the provincial legislature and not the conflict with promissory notes. The Chief Justice of the Federal Court, Maurice Gwyer, ruled in favour of Lionel Leach's High Court decision.[383] According to Gwyer,

> It must inevitably happen from time to time that legislation though purporting to deal with a subject in one list touches also on a subject in another list …. I am clear that the pith and substance of the Madras Act, whatever it may be, cannot at any rate be said to be legislation with respect to negotiable instruments or promissory notes, which are central subjects. And it seems to me quite immaterial that many or even most of the debts with which it deals are in practice evidenced by or based upon such instruments. I am of the opinion, therefore, that the Act cannot be challenged as invading the forbidden field of the Federal Legislative List.[384]

Eventually, the Federal Legislature issued an ordinance in 1945, enforcing the interest rate ceiling prescribed in the MARA. Credit disputes in provincial courts were subject to judicial intervention after 1937. In the case of *N S Sreenivisa Rao Vs. G M Abdul Rahim Sahib*, for example, High Court judges amended interest rates. The creditor and borrower contractually, on signed promissory notes, agreed an interest rate of 12 per cent per annum in 1944. The creditor, in this case also the plaintiff, approached the courts to enforce repayment at the agreed terms. The lower court ruled in favour of the defendant, prompting the creditor to appeal this decision in the High Court. Citing Section 13 of the MARA, High Court judges enforced repayment at an interest rate of 5.5 per cent per annum in 1956.[385] Did the inclusion of contracts into the scope of judicial intervention impact the supply of credit?

Credit supply contracted following the enforcement of similar laws in various provinces in the 1930s. According to an official report, 'consequent on the legislation to abolish the system, the landlords (across India) have completely given up their practice of advancing loans to cultivators.'[386] Approximately three-quarters of the total number of licensed moneylenders operating in rural United Provinces exited the market between 1936 and 1949.[387]

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[383] Maurice Linford Gwyer was a judge and academic in late-colonial India. Gwyer was the Chief Justice of India's Federal Court between 1937 and 1943 as well as Vice Chancellor of Delhi University between 1938 and 1950.

[384] "Federal Court", *The Times of India,* 7 December 1940.

[385] N S Sreenivisa Rao Vs. G M Abdul Rahim Sahib, (1956 2 MLJ 189, Madras, 20 March 1956). In the time between the date of loan issue and the case hearing, the borrower repaid a part of the loan to the creditor. Judges took this into account and therefore enforced the interest rate of 5.5 per cent rather than 6.25 per cent on the remaining amount.

[386] S Thirumalai, *Post-war Agricultural Problems and Policies in India*, (Bombay, 1954), 190.

[387] G D Agarwal, *Reorganisation of Agricultural Credit*, (Kanpur, 1952), 129.

The credit contraction in Madras was evident in the decline in borrowings between 1939 and 1945. This reflects a supply problem as the demand for credit persisted.[388] The abrupt contraction in credit supplied by moneylenders resulted in an increase in the demand for *Taccavi* loans (a limited number of which were granted by district governments).[389] Yet, this was not supplied at a scale large enough to match the decline in informal credit. The market contracted as the diminishing presence of the village moneylender was not matched by alternative sources. The Madras Estates Land Act Committee summarised this supply disruption soon after the MARA was implemented. According to the committee,

> The government has not been able to create money for complete discharge of the scaled down debts.…Naturally the agriculturist finds himself in trouble with regard to credit. The old sowcars (moneylenders) whose debts have been cut down under the Act (MARA) would not be enthusiastic and ready to lend moneys to the agriculturist to the extent to which they were doing before the Act was passed.[390]

Economists in the 1940s and 1950s reported similar findings. C. W. B. Zacharias, Professor in Economics at the University of Madras, claimed in 1950 that the MARA, 'had the baneful effect of drying up the sources of credit in village areas.'[391] G. D. Agarwal, an agricultural economist, suggested that 'rapid changes in debt legislation have made creditors less certain of their future position.'[392] C. F. Strickland, economist and member of the Indian Village Welfare Association, stated that intervention 'impaired the credit of an agriculturist.'[393] Strickland was not a promoter of free markets nor opposed to intervention. Writing in a non-legislative role, Strickland believed that intervention did not achieve a balance between protecting peasants and maintaining an active credit market. Lending, according to Strickland, was unprofitable post-intervention. In an excerpt of one publication, Strickland compares borrower protection to medical surgery where excessive legislation did more harm than good for the rural economy,

> Creditors may acknowledge the necessity of making sacrifices in a crisis, but they will not give credit in the future unless they are assured of repayment. Even a single surgical operation causes a shock to the system, and there is much evidence to show that conciliation, an inevitable process at the moment, has impaired the credit of an agriculturist. Credit has no doubt been excessive in the past, and some contraction is beneficial. The process should

388 Agarwal, *Reorganisation of Agricultural Credit*, 129.

389 Naidu and Vaidyanathan, *Madras Agriculturists Relief Act*, 23-24.

390 *MELAC Report*, 223.

391 C W B Zacharias, *Madras Agriculture*, (Madras, 1950), 167.

392 Agarwal, *Reorganisation of Agricultural Credit*, 129.

393 C F Strickland, *The Relief of Agricultural Debt,* (London, 1939), 15.

> not, however, be unduly prolonged; a good surgeon works quickly and leaves the patient thereafter to return to normal life.[394]

Commissioned by the provincial government, Narayanaswamy Naidu compiled a report after conducting a credit survey of 8530 families in 160 villages across the Madras province in the mid-1940s. The report explains that village investigators carefully selected villages that reflected differences in geographical and socio-economic features, surveying rich and poor cultivators in wet and dry regions within the province. Naidu's team of investigators surveyed villages to estimate the extent of borrowing in two years, 1939 and 1945. Naidu grouped villages into 10 zones and aggregated the household-level data zonally. The report anonymised the villages and the zones. The data does not specify type of loan instrument. However, as Naidu collected data from households across income classes, the chapter assumes that the data is a representative sample of unsecured and contracted loans.

Figure 4.6 illustrates the data by zone, adjusting for commodity price inflation between the two years. The data shows that the value of credit borrowed per household declined by a significant margin. Zone 3 showed the largest decline where the real value borrowed per household was 76 per cent lower in 1946 relative to 1939. The government report celebrated this reduction. Officials believed that the reduction was evidence of diminishing exploitation as borrowers were no longer held in perpetual debt bondage, under the market power of monopolist lenders.[395] However, as discussed, the reduction was not a demand-driven transition but instead reflected a supply-side shock where credit became more inaccessible after intervention.

Policymakers within the provincial administration disagreed on the drivers of credit reduction. Some administrators expressed concern over the contraction in credit supply following the interest rate ceiling. Indeed, in a co-authored a report in 1939, Naidu previously commented on the MARA, claiming that, 'the first effect of the Act will be a drastic curtailment of credit and the seasonal agricultural operations will suffer through the drying up of credit.'[396] From a survey of villages in the Cuddalore municipality after intervention, Naidu and Vaidyanathan find that 'a good number of agriculturists have left their land fallow on account of their inability to get credit.'[397] This contradicts Naidu's subsequent position in the 1946 report, which translates declining household debts to freedom from 'the disease of indebtedness' and rising prosperity.[398]

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[394] Strickland, *The Relief of Agricultural Debt*, 15.

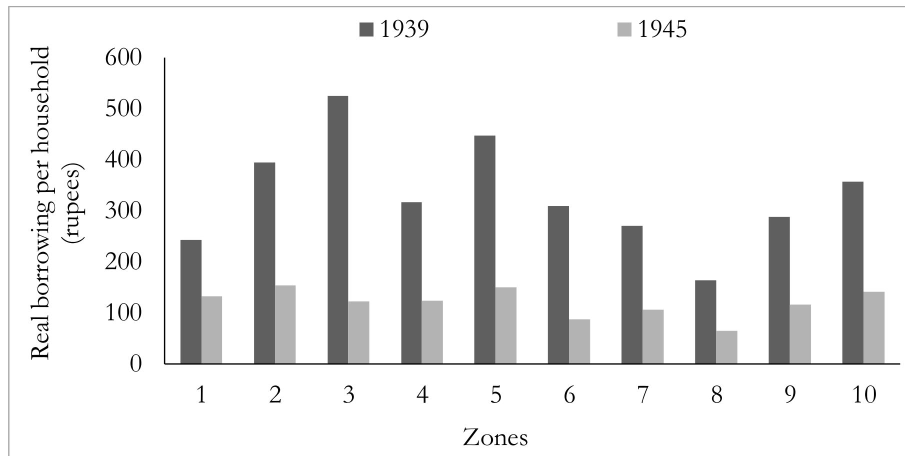
[395] *Report of the Economist*, 43.

[396] Naidu and Vaidyanathan, *The Madras Agriculturists Relief Act*, 23.

[397] Naidu and Vaidyanathan, *The Madras Agriculturists Relief Act*, 23.

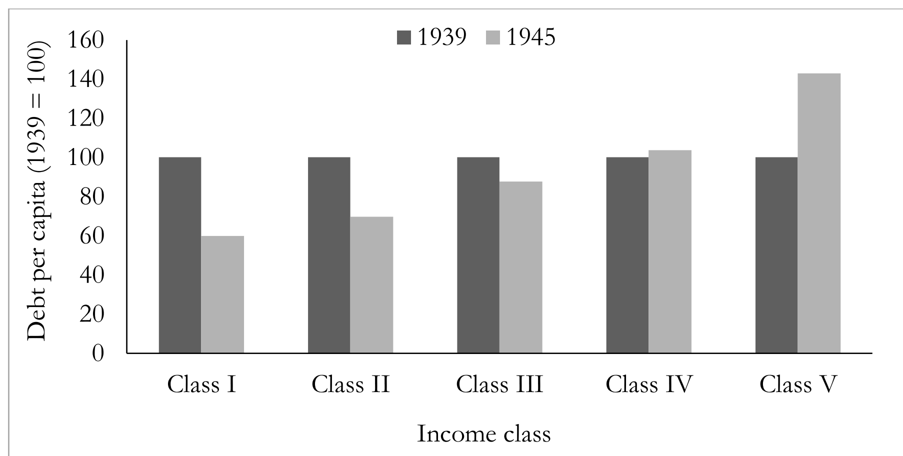
[398] *Report of the Economist*, 38.

Figure 4.6 Real value borrowed per household in 10 zones, 1939 and 1945 (1939 prices)



Source: *Report of the Economist*, 43; McAlpin, "Price Movements".
Notes: The source aggregated individual observations of 8530 families into anonymised regional zones. The data shows the real value of credit borrowed divided by the number of families in each zone. The graph deflates nominal credit data using McAlpin's commodity price index. Total borrowing in 1945 is adjusted to 1939 prices.

Figure 4.7 Growth rate in nominal debt per capita, 1939 and 1945



Source: *Report of the Economist*, 109.
Notes: The report aggregated individual observations of 8530 families by borrowing class. The report defined each borrowing class as follows. Class I was defined as 'Big Landholders' where borrowers owned land above 25 acres. Class II was defined as 'Medium Landholders' where borrowers owned between 5 and 25 acres. Class III was defined as 'Small Landholders' where borrowers owned less than 5 acres. Class IV borrowers were tenants and Class V borrowers were landless labourers. The number of families chosen in the survey differed by class. Of the total 8530 surveyed families, 240 belonged to Class I, 2097 belonged to Class II, 3784 belonged to Class III, 1130 belonged to Class IV and 1279 belonged to Class V. The graph indexes each class for ease of comparison between the classes. The base year in the graph is 1939.

As illustrated in Figures 4.6 and 4.7, household surveys show that the real value of credit borrowed contracted across income categories. When deflated by prices, the value of loans across borrowing categories declined between 1939 and 1945. However, the wealthier borrowers were more affected than the poor. Nominal borrowings declined for the top 3 income classes, with a substantial decline for the richest households. In contrast, nominal borrowings increased for households in the lowest income classes. Indeed, the average debt per capita among 1130

smallholders in Class IV increased from 20.5 rupees to 21.3 rupees between 1939 and 1945. The debt per capita increased by larger margin, prior to price adjustments, for tenants and labourers. In contrast, the average debt per capita decreased from 188.5 to 113.3 rupees for Class I borrowers and 91.7 to 64.1 rupees for Class II borrowers. While the surveyors suggest that rising wartime prices benefitted the rich more than the poor and this reflects in the distinctive amounts borrowed, a more plausible explanation seems to be in the type of loans provided. As the next section of the chapter will show, unsecured loans and crop sharing arrangements operated outside the scope of the MARA. Mortgages, promissory notes and other loans that were sized high enough to warrant enforcement in courts were most affected by the MARA. Therefore, small loans to the poor remained informally enforced and untouched by government regulations.

In short, credit intervention led to a judicial conflict between the protection of free enterprise and more equitable markets. Judges prioritised the latter, limiting the scope of contract laws and expanding the scope of credit laws. This section has demonstrated that state intervention led to a contraction in the supply of unsecured and contracted loans. The disruption in credit supply reinforced the contentious nature of the MARA. The MARA triggered a loss in efficiency as borrowers had restricted access to credit following the state-imposed artificial price ceiling. However, the decline in lending differed by class of borrower. Credit to high-income borrowers saw a larger decline than credit to low-income borrowers. The next question to consider is whether moneylenders in the post-MARA period provided loans in accordance with regulation. We turn to whether the credit market operated more equitably after the MARA.

4.5 Intervention and Enforcement Costs

This section shows that after intervention the use of contracts declined and a black market for rural credit emerged. Creditors inflated the value of loans in unpaid and new contracts to account for higher interest rates than legally permitted. Creditors operated outside the legal structure where interest rates charged exceeded the imposed restriction. Indeed, from a survey of moneylenders in the early 1950s, half of all loans in the Coimbatore district reported interest rates of between 10 and 12.5 per cent in 1954 while only a quarter reported rates below 7 per cent.[399] This data was collected as part of a survey commissioned by the Indian government in 1954. Despite the official status of this report, lenders testified to charging higher interest rates than legally permitted.

[399] *Rural Credit Survey District Monograph: Coimbatore,* 16.

Lenders resorted to fraud and law evasion. The Rural Banking Enquiry Committee reported in 1950 that, 'such legislation has already had the effect of driving a large number of moneylenders out of business or encouraging them to resort to evasive practices resulting in restricted and costlier credit, particularly to the small agriculturist.'[400] Writing in 1952, Dantwala, an agricultural economist, argued that debt relief laws had an insignificant impact on equity in rural credit. 'Honest moneylenders' opted out of the market as they were not prepared to lend with new interest rate restrictions.[401] The 'dishonest moneylender' then dominated the market by endorsing methods of law evasion.[402] This is supported by a report in the same year which stated that, 'their (the cultivator's) dire need for credit has given encouragement to a class of unscrupulous moneylenders who can effectively evade the provisions of the debt legislation by practicing dishonest means.'[403]

How did creditors manage to continue lending and ignore the law? Moneylenders sustained a previous practice and evaded laws through the manipulation of contracts and ledgers. Lenders inflated loan principals on promissory notes to include higher rates of interest. In cases of default, creditors renewed promissory notes to include previously unpaid interest.[404] Interest rates compounded, through inflated contracts, ultimately matching those charged prior to the enforcement of MARA.[405] Legal records provide evidence of this contract falsification. In the case of *Garimella Mallikharjuna Rao Vs. Mangipudi Tripura Sundari*, for example, a credit contract in 1936 contained a rate of interest higher than the legal ceiling. Following defaults, the creditor renewed the promissory note in 1939, 1942 and 1945 where the principal recorded was inflated to include a higher rate of interest. The renewed promissory note recorded an interest rate lower than the ceiling. The creditor refused to renew the promissory note beyond 6 April 1945 and expected the repayment of overdues, valued at 1072 rupees and 5 annas. The borrower sued the creditor in the District Court in Amalapuram for attempting to recover unpaid loans with interest rates exceeding the legal limit. The court ruled in favour of the creditor, where judges claimed there was no evidence of contract falsification or unwillingness to conform to the law. The decision was appealed in the High Court where judges ruled in favour of the borrower. The court reduced the repayment value to 650 rupees and 2 annas and attached an interest rate of 5.5 per cent per annum,

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[400] *Report of the Rural Banking Enquiry Committee*, (Delhi, 1950), 52.

[401] M L Dantwala, "Agricultural Credit in India-The Missing Link." *Pacific Affairs* 25, no. 4 (1952), 351-352.

[402] Dantwala, "Agricultural Credit", 351-352.

[403] Agarwal, *Reorganisation of Agricultural Credit* 129.

[404] *Rural Problems in Madras*, 351.

[405] Zacharias, *Madras Agriculture*, 179.

to apply to the loan from the date of the District Court's decision in 1947 to the final High Court verdict in 1953.[406]

Following the MARA, judges forced some moneylenders to present account books and ledgers in court disputes.[407] Similar to the above, lenders manipulated ledgers through principal inflation following the MARA.[408] In one dispute, *A. L. Vr. St. Veerappa Vs. Chinnasamy Alias Samba Goundan and ORS,* the creditor inflated three promissory notes attached to loans provided to the same borrower in the 1920s. The lender recorded inflated principals in ledgers, while the borrower signed and thumb-printed the ledgers. The parties executed the first promissory note in 1922, the second in 1923 and the third in 1925. The third recorded an unpaid value of 2500 rupees. The creditor attempted to enforce the repayment of this loan in the District Court in the Coimbatore district in 1944. The borrower accepted that loans in 1922 and 1923 were unpaid and the 1925 promissory note was a loan extension. However, the borrower argued that the loan extension violated the MARA as it allowed the creditor to recover more than double the initial principal provided. Indeed, as previously discussed, repayments that exceeded double the original principal violated the *Damdupat* rule in the MARA. The borrowers claimed that the lenders deliberately 'suppressed all the account books' which would indicate the inflation of the loan beyond the legal value.[409] The district court judges ruled in favour of the borrower and wrote-off the majority of the unpaid loan for exceeding double the initial principal. When the creditor appealed this decision in the High Court, the judges subpoenaed the ledgers to estimate the value of loans unpaid, accounting for regulatory deductions. The creditor ultimately presented three ledgers, with loan accounts that did not record the borrowing in dispute. The high court judges sustained the lower court's decision.

In the longer term, the MARA discouraged the use of contracts altogether. Government reports in the 1930s commonly describe the use of pro-notes as 'widespread.'[410] However, similar reports in the 1940s and 1950s sparsely mention the use of this instrument.[411] According to the Rural Credit Survey, the majority of rural lending in Madras was unsecured. Creditors secured some loans with mortgage instruments, but none by promissory notes. As shown in the previous chapter,

[406] Garimella Mallikharjuna Rao Vs. Mangipudi Tripura Sundari*,* (1953, 2MLJ 313, Madras, 27 March 1953).

[407] The case A. L. Vr. St. Veerappa v. Chinnasamy Alias Samba Goundan and ORS*,* (1950, 2MLJ 328, Madras, 5 April 1950), provides an example where principals were not recorded on contracts prior to the borrower's signature. The creditor inflated the principal without the borrower's consent following default.

[408] *Rural Problems in Madras*, 351.

[409] A. L. Vr. St. Veerappa v. Chinnasamy Alias Samba Goundan and ORS*,* (1950, 2MLJ 328, Madras, 5 April 1950).

[410] This is especially apparent in the 1930 Banking Enquiry and 1935 Report on Indebtedness.

[411] The instrument is sparsely mentioned in *Report of the Economist* and *Rural Credit Survey*.

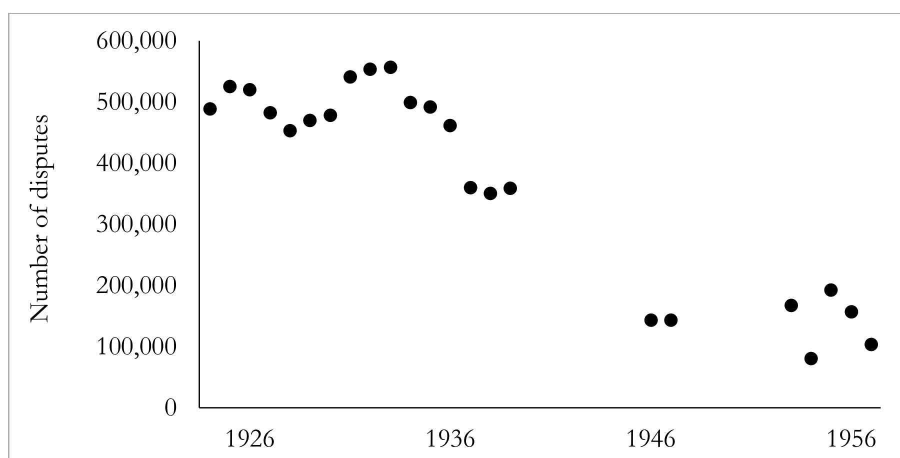
co-applicant guarantees were a universal feature of credit contracts. The Rural Credit Survey reported in 1954 that co-applicant guarantors were not part of any of the loans surveyed in six districts.

Table 4.1 Ratio of secured loans to total, 1954

District	*Immovable Property (per cent of total)*
Coimbatore	26.8
Cuddapah	0
Kurnool	0
West Godavari	1.4
Chingleput	23.7
Ramanathapuram	50.6

Source: *Rural Credit Survey*, 553.
Notes: The source estimates the value of loans owed to agriculturist moneylenders, classified by security provided. The primary security mentioned in the source is immovable property. The other form of security recorded is referred to in the source as 'Guarenteed by Third Party', reflective of the use of promissory notes. The survey listed the number of loans guaranteed by a third party as 0 for all districts and hence of no value. Calculations made in the source.

Figure 4.8 Number of credit disputes in civil courts, 1925-57



Source: *Statistics of Civil Courts in the Madras Presidency 1925-1958*.
Notes: The data estimates the total number of registered disputes involving money in all civil courts across the province. Data is unavailable for the following periods: 1940-1945, 1948-1952.

The decline in the use of contracts reflected the moneylender's aversion to courts more generally. Creditors avoided formal procedure, restricting the impact of the MARA on more

equitable outcomes in the credit market. Disputes resolved outside the formal legal structure were excluded from the effects of borrower protection laws. The provincial government delegated the enforcement of the MARA to judicial discretion. Using direction provided in the MARA, judges evaluated the incidence of borrower exploitation based on rates of interest in credit disputes. The potential for the act to enforce more equitable outcomes for borrowers was then conditional on the resolution of credit disputes in courts. As shown in the previous chapter, creditors were reluctant to approach courts and formal procedures in the unregulated market. The enforcement of the MARA only accentuated this pattern.

Figure 4.8 highlights key transitions in the number of disputes between 1925 and 1960. The Depression period witnessed an increase in the amount of credit related litigation. This process corrected as the number of disputes in 1933 returned to its previous position in the late 1920s. Coinciding with the onset of legislative measures (the 1935 Madras Debtors Protection Act), there was an initial decline in the number of credit proceedings in the late 1930s. The most significant shift occurred between 1939 and 1946.[412] The number of credit disputes in courts more than halved in this period. This trend continued throughout the 1950s. Data from the Rural Credit Survey supports the hypothesis that creditors were reluctant to approach courts. According to the survey, 29 out of 31 surveyed lenders in a group of coastal districts reported defaulted loans. However, fewer than 10 per cent of lenders reported involvement in legal litigation in the same region.[413]

The provincial courts recorded credit disputes, where interest rate ceilings exceeded guidelines, as cases under the Madras Agriculturists Relief Act.[414] The number of registered cases measures the number of transactions that judges altered under the new law. In this context, Table 4.2 estimates the scope and impact of credit intervention. As illustrated, few credit disputes approached the courts following MARA. The number of MARA cases between 1938 and 1945 was 10 per cent of the number of mortgage loans provided between 1938 and 1941 alone. The value of credit under dispute between 1938 and 1945 was 20 per cent of the value of mortgage loans between 1938 and 1941. Pre-MARA provincial reports suggest that mortgages accounted for half of the rural credit market size. The Provincial Banking Enquiry also suggests that default rates of 30 per cent were typical of credit markets in 1929. Assuming this trend continued into the early 1940s, the number of MARA disputes in courts between 1938 and 1945 was only 20 per cent of defaulted credit transactions between 1938 and 1941. Furthermore, if we had access to mortgage

[412] With the unavailability of data between 1940 and 1945, it is difficult to determine the exact date of this transition.

[413] *Rural Credit Survey, Part I,* 474. The data represents 'East Coast' districts from Madras, Mysore and Hyderabad. The survey included the following districts: Nizamabad, West Godavari, Chingleput and Ramnathapuram.

[414] Hereafter referred to as 'MARA cases.'

data for the entire 1939 to 1945 period, it would only corroborate this claim that judges managed to intervene in a marginal number of credit disputes after the MARA.

Table 4.2 MARA Cases relative to mortgage loans

Cases 1938-1945 (1)	*Case value 1938-1945 (2)*	*Mortgages 1938-1941 (3)*	*Mortgages value 1938-1941 (4)*	*Ratio 1 to 3*	*Ratio 2 to 4*
204,528	95,466,104	1,479,302	433,147,259	0.1	0.2

Source: *Report of the Economist*, 53; *Report on the Administration of the Registration Department 1939-1941*.
Notes: The data on legal cases runs from March 1938 to September 1945. The first column measures the total number of registered disputes under the MARA. By September 1945, courts disposed of 203,874 cases while 654 disputes were still pending. The second column measures the value of credit transactions (rupees) involved in the registered cases. The third and fourth column measure the number and value (rupees) of mortgage loans between 1938 and 1941. We do not have access to mortgage data for the 1941 to 1945 period. Ratios calculated by the author.

Loan sizes were high, relative to the average, in MARA cases. As argued in the previous chapter, the size of mortgage loans was higher than unsecured loans as creditors priced enforcement costs into loans when executing legal instruments. Yet, the ratio of the value of credit transactions under review in Table 4.2 to the value of mortgages was higher than a comparison of the number of transactions. This suggests that the value of loans under dispute were higher than the value of the average mortgage loan. In other words, the chapter suggests that the size of loans under judicial intervention exceeded the size of both mortgage and unsecured loans in the same period. Following the MARA, creditors either avoided courts or seemed to approach courts when the size of loans far exceeded the average. Increased enforcement costs after the MARA explains this result.

The decline in courts and contracts was driven by enforcement costs. The obligation to report lower interest rates on signed contracts increased the costs of this method of enforcement. Put differently, dispute costs could no longer be transmitted to reported interest rates on promissory notes. This raised the minimum loan size required to justify the use of this instrument. More generally, creditors responded to intervention by operating outside the limits of legal procedure. The MARA imposed a conflict between formal and informal enforcement arrangements where moneylenders were incentivised to adopt the most cost-efficient procedure. In this context, lenders evaded the artificial price control by avoiding courts and adopting alternate enforcement arrangements instead. Informal dispute resolution substituted for this decline in the role of formal procedure as an enforcement mechanism. Creditors relied on alternate forms of loan securities to evade legal procedure. From a cast study of villages in 1939, for example, Naidu and Vaidyanathan

claim that creditors demanded jewellery or household furniture as forms of credit security.[415] The MARA did not regulate these methods of lending.

Crop was a common substitute for contract or land as a form of collateral in the regulated market. The ease of this substitution was driven by the distinctive features of the credit market in Madras. Homogeneity in the occupations of lenders and borrowers, and increasing commodity prices in the 1940s, lowered the costs of interlinked transactions. In the absence of formal contracts, crop was a viable article of collateral for lenders that were also cultivators.

Sources suggest that sharecropping arrangements between landlords and tenants were common in non-commercialised regions, but these sources do not indicate that there was a rise in this particular credit arrangement after the MARA. Under sharecropping contracts, landlords advanced loans exclusively to tenants. Borrowers repaid by sharing produce at the end of the harvest, where the transactions of rent and credit were interlinked.[416] In each structure the value of crop obtained by the moneylender included repayment of the principal and interest on the loan provided.[417] There were two reported structures of sharecropping in Madras during this period. The *Kuthugai* arrangement relied on fixed rent cash transactions. The *Varam* arrangement functioned as a joint venture with a pre-determined crop allocation to both agents. In general, both arrangements involved a payment at the end of the production cycle which included rent and credit. However, the fixed rental structure relied on cash.[418] In order to purchase the inputs required, landlords provided cash loans at the start of the production cycle. Creditors pre-determined a fixed rent which borrowers paid at the end of the production cycle.[419] Under the crop allocation arrangement, landlords and tenants shared the final produce in kind at a pre-determined ratio by both parties. The sharing ratio at the end of the production cycle depended on the ratio of inputs supplied by landlord and tenant.[420] According to the District Gazzetteer, landlord-creditors provided tenant-borrowers '30 or 33 per cent' of the total produce through the *varam* system in the Tanjore

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[415] Naidu and Vaidyanathan, *The Madras Agriculturists Relief Act*, 23.

[416] Anthropological studies by Kathleen Gough and Joan Mencher discuss sharecropping arrangements in the Tanjore and Chengleput districts in Madras. See Kathleen E Gough, "Brahman Kinship in a Tamil Village 1." *American Anthropologist* 58, no. 5 (1956): 826-53; Joan P Mencher, *Agriculture and Social Structure in Tamil Nadu : Past Origins, Present Transformations and Future Prospects*, (Durham, 1978).

[417] Zacharias, *Madras Agriculture*, 152-154.

[418] Zacharias, *Madras Agriculture,* 148.

[419] It was common for transactions at the end of the production cycle to have been in kind under sharecropping regimes. Creditors pre-decided the amount of produce shared at the end of the harvest at the start of the cultivating season according to a predicted market price of the final commodity. Lenders determined the volume shared according to the market price of the commodity. In a bad year, cash transactions increased the likelihood of default whereas a sharing of the final produce in kind perhaps decreased this risk.

[420] Landlords provided inputs into cultivation as loans in kind. Landlords filtered the principal and interest of the loan into the amount of produce owed to the landlord creditor at the end of the cycle.

district.[421] This demonstrates the second difference between both arrangements which was the role of the tenant. Cultivation was pursued as a joint venture by both landlord and tenant under the crop distribution arrangement.[422]

Creditors were more likely to rely on informal sharecropping arrangements in districts where cultivators commonly transacted in kind. The proportion of produce provided by tenants to landlords in terms of total expenditure in kind suggests that sharecropping was increasingly common in these areas. This was higher in the East Coast districts as close to half of total expenditure in kind was spent on the sharing of produce with landlords.

Table 4.3 Landlord-tenant cash and kind expenditure, 1954

Region	*Cash Expenditure (per cent)*	*Cash Contributions (per cent)*	*Kind Expenditure (per cent)*	*Kind Sharing (per cent)*
South Deccan	69.2	1.4	30.8	33.6
East Coast	62.3	1	37.7	43.8

Source: *Rural Credit Survey, Part II*, 834-854.
Notes: Cash Expenditure estimates the proportion of cultivation expenditure paid in cash. Cash Contributions then sub-divides this cash expenditure by the amount spent by landlords on cash contributions to tenants and co-sharers. Kind Expenditure estimates the proportion of expenditure in kind to total cultivation expenditure. Kind Sharing estimates the share of produce shared with the landlord or co-sharer as a proportion of the total expenditure in kind. Payments solely for rent are excluded from this table. The table documents the amount of produce shared between landlords and tenants apart from rents. South Deccan districts include Hassan, Bangalore, Coimbatore and Cuddapah. East Coast includes Nizamabad, West Godavari, Chingleput and Ramnathapuram.

However, sharecropping was a supplement to, rather than substitute of, formal procedure as an enforcement mechanism. According to an official report of the unregulated market in 1935, landless labourers and tenants commonly borrowed using sharecropping arrangements.[423] As such, sharecropping was an arrangement exclusive to the landlord-tenant relationship and thus unaffected by the MARA. This could explain the rise in the nominal value of loans to tenants and labourers between 1938 and 1945, as depicted in Figure 4.7.

Contemporary studies in the 1940s suggest that forward contract crop sharing arrangements became more common for the lenders and borrowers that were not tied to tenancy arrangements. When executing the forward contracts, creditors and debtors agreed on a predicted value of crop prior to the harvest. Borrowers promised the repayment of loans in cash or a volume of crop.

[421] *Madras District Gazetteers: Tanjore*, 111.

[422] P J Thomas and Ramakrishnan K C, *Some South Indian Villages: A Resurvey*, (Madras, 1940), 346.

[423] *Report on Agricultural Indebtedness*, 18.

Creditors determined the repayment amount according to predicted commodity prices. Through this structure, the moneylender benefitted from the price differential of the commodity at sale and the commodity at attachment. Lending through forward contracts was common for trade but not agriculture in the unregulated credit market. Different markets serviced loans for cultivation and loans for trade in the 1920s and 1930s. Borrowers used agricultural credit to finance cultivation expenses and borrowed at the start of the production cycle. Borrowers used trade credit to finance the costs of storage, transport and marketing.[424] The Provincial Banking Enquiry distinguished between the suppliers of trade credit and the suppliers of agricultural credit.[425] Trade creditors were commonly 'traders and commission agents', or 'petty merchants' including shopkeepers or local retailers. Merchants with storage facilities that benefitted from the price differential of commodities, tended to provide trade credit.[426] In other words, suppliers of trade and marketing loans differed from those provided credit for cultivation expenses. However, according to Thirumalai, crop sharing arrangements increased in popularity in the 1940s. Previously isolated credit markets merged in the 1940s. Referring to credit in the late 1940s, Thirumalai notes, 'in the present unorganised set up, the finance for marketing is unwittingly merged in the ordinary loans extended to cultivators at the time of sowing.'[427]

Lenders charged an interest rate calculated by the difference between the predicted price and market price. Creditors bore a considerable price-driven risk in this method of lending. Market price fluctuations impacted the value of commodities as collateral. Writing in 1950, Zacharias suggested that creditors successfully mitigated the risk of price shocks by pre-negotiating the value of crop at a much lower rate than the predicted market price. According to Zacharias, some creditors provided loans against the borrowers' entire produce as collateral.[428] The flexibility available to lenders to claim the borrower's entire produce acted as an insurance against both failed harvests and commodity price shocks. In this context, increase in commodity prices in the early 1940s made the use of forward contract crop arrangements more lucrative. According to one report, the price of rice and cotton increased by three times between 1938 and 1945.[429] Groundnut prices increased by four times in the same period. According to a government report in 1946, the

[424] Rural Problems in Madras, 314.

[425] *Provincial Banking Enquiry,* 30.

[426] *Provincial Banking Enquiry*, 30.

[427] Thirumalai, "Post-war Agricultural Problems", 197.

[428] Zacharias, *Madras Agriculture,* 152-154.

[429] *Report of the Economist*, 47.

price hike prompted cultivators to colloquially refer to groundnut as the *Chitukilichan nut*.[430] Literally translated to 'tearing to pieces contracts nut', this reflects the impact of rising prices on the changing attitudes towards commodity as a valuable unit of collateral in rural credit.

The structure of village administration lowered enforcement costs in crop sharing arrangements. Avoiding courts and legal procedures, creditors enforced social sanctions on defaulting borrowers. Creditors and borrowers transacted in the same village, allowing the former to easily identify the creditworthiness of the latter. Lenders excluded risky borrowers, in this case previous defaulters, from participating in the local credit market.[431] In this market structure, the debtor's fear of credit being withheld in the future enforced the timely repayment of loans.

According to accounts from anthropologists in the 1950s and 1960s, elite networks colluded to enforce social sanctions in villages. Villagers with socio-political power enforced sanctions on credit defaulters without similar influence. Collectives of 'headmen', usually representing large landowners in villages, arbitrated small credit disputes. These forums were generally a final court of appeal and the collectives enforced the repayment of defaulted loans.[432] The collectives enforced harsh punishments for repeated defaulters, especially when the defaulters relied on village landowners to make a living. Observing villages in the Tanjore district, Kathleen Gough argued in the mid-1950s that village collectives, or groups of landowners in villages, evicted tenants or withheld wages for labourers. Caste networks, according to Gough, reinforced social sanctions on defaulted borrowers. Despite the existence of village, district and provincial courts, a network of village headmen belonging to the same caste frequently formed the final court of appeal in small credit disputes. Gough reported that landowners, headmen, shopkeepers, moneylenders and panchayat committees belonged to the same caste within a village in the Tanjore district.[433] Lenders were able to leverage on this caste network to ensure the exclusion of defaulted debtors from future loans, tenancy or employment. The role of caste in this instance was the strengthening of social sanctions on defaulters.

In policy terms, the interlinking of commodity and credit markets diminished the impact of intervention. The MARA increased the costs of formal procedure. The MARA raised dispute costs on defaulted mortgage loans yielding interest rates above 6.25 per cent. The MARA also increased the costs of enforcing promissory notes. Courts invalidated pre-1938 contracts that declared rates higher than 6.25 per cent and lenders could not legally issue new contracts that transmitted

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[430] *Report of the Economist*, 22.

[431] *Rural Credit Survey, Vol. II*, 172.

[432] *Rural Credit Survey, Vol. II*, 56.

[433] Gough, "Brahman Kinship".

enforcement costs onto interest rates. Creditors recovered a higher interest rate on forward contract loans, benefitting from the difference between the market price of crops and the predicted prices at the time of lending. These lending arrangements were enforced informally and outside courts. Interest rates were unregulated as loans were not subjected to judicial review. In short, the chapter corroborates Dantwala's observation that the credit market operated either as or more inequitably after intervention.

State officials did retrospectively identify the problem in the design of intervention. The amended Madras Agriculturists Relief Act (The Tamil Nadu Debt Relief Act) in 1976 contained a specific provision for loans paid in cash but repaid in kind.[434] Lawmakers attempted to include crop sharing arrangements within the regulatory scope of courts and debtor protection laws. However, this amendment did not solve previous failures in design. The challenges of regulating informal exchange constrained the regulatory sphere of the amended credit laws. Lending regulation continued to be administered through courts. As a result, the amended law expanded the scope of judicial discretion and not the sphere of the regulation itself.

4.6 Conclusion

Credit intervention in the 1930s aimed to bring moneylenders within the sphere of formal administration. The government attempted to control credit exploitation through laws enforced by courts. This design contradicted the previously formal nature of the unregulated credit market. A market left to its own devices for much of the colonial period, evidence shows a symbiotic relationship between informal exchange and formal institutions in the unregulated rural credit market in Madras. Creditors relied on contracts and courts, pricing the costs of accessing these formal institutions to the borrower. Focused credit policy in the late 1930s caused a reversal in this form of exchange. Paradoxically, state intervention disassociated the market from the regulatory capacity of the state and administrative machinery. Whereas most historians think that the credit market was always informal and that was the source of its problem, this account suggests that the informal was, if not created, recreated and strengthened by regulation. Regulation was part of the problem of market failure.

The provincial government interpreted high interest rates as a sign of exploitation, elite capture and peasant distress. The policy response was direct interest rate regulation supplemented with a strengthening of property rights. The aim was an undisrupted supply of credit on more equitable

[434] Section 8, Tamil Nadu Debt Relief Act 1976.

terms for the borrower. In practice, laws not only failed to make equity gains but also triggered losses in efficiency. The credit market contracted and unsecured loans were provided at illegal rates of interest. The intervention was a superficial attempt at targeting inequities in rural credit. Environmental challenges reduced profitability and increased default rates. Enforcement costs exceeded the average size of loans, leading to high credit prices. The interest rate ceiling led to supply contraction which exacerbated illiquidity in rural Madras while also increasing enforcement costs, placing further upward pressure on credit prices. In a series of enforcement trade-offs, state intervention increased the costs of some arrangements but not others. The ceiling on interest rates increased the costs of mortgage and contracted loans with limited impact on crop sharing arrangements. Accordingly, a subsequent decline in the supply of credit and shift in the preferred lending arrangement limited the impact of credit intervention. Peasants accessed credit through illegal black markets with constrained supply and non-transparent prices. In these black markets, crop substituted land as a valuable form of unregulated collateral. Increasing commodity prices in the early 1940s made this shift lucrative for the creditors.

If the price ceiling did not work, then did the government's attempt to increase competition in the credit market bring more successful results? Indeed, interest rate ceilings formed one approach to the credit problem while establishing credit cooperatives to compete with private moneylenders formed another. Cooperatives had the potential to produce better results as it offered a combined solution to enforcement and liquidity constraints. However, as the next chapter demonstrates, cooperatives did not produce the desired results in rural Madras.

Chapter 5. Regulating Raiffeisen Cooperatives, 1930-1960

5.1 Introduction

As discussed in previous chapters, the colonial government acted on a belief that investment rates were low and the price of credit was high because markets were supply-constrained and non-competitive in rural India. One aspect of state intervention was the regulation of moneylenders in the 1930s. Another aspect was the establishment of competing sources of credit. Policy initiatives from the early twentieth century established competing creditors to rival private moneylenders. Officials in the colonial government expected greater market competition to increase the supply of low-cost rural credit. However, the high risk of lending in the Indian countryside was a barrier to entry for commercial banks. Cultivation was seasonal and dependent on unpredictable rainfall patterns. Crop failure was common, leading to high default rates. Inefficient courts restrained institutional development in the market for agricultural credit.

Cooperative banking offered a potential solution to the problem.[435] Contemporary studies on Raiffeisen cooperatives in Western Europe referred to these as models to follow.[436] Present-day scholarship endorses that view. Cooperatives in Germany and the Netherlands provided credit to the poor and reported profits in the nineteenth and early twentieth century.[437] Scholars explain their success by highlighting two key pre-conditions for successful cooperative banking.[438] First, cooperatives were self-funded within small membership groups. Rich and poor peasants saved in local cooperatives, while a high ratio of savings to external borrowing ensured banks were not

[435] Stiglitz, "Peer Monitoring and Credit Markets."; Besley and Coate, "Group Lending, Repayment Incentives and Social Collateral"; Ghatak, "Screening by the Company You Keep"; Jonathan DeQuidt, Thiemo Fetzer, and Maitreesh Ghatak, "Group Lending without Joint Liability." *Journal of Development Economics* 121 (2016): 217. Each article broadly agrees that group lending arrangements can, under certain conditions, deliver a structure of risk sharing that reduce information and enforcement costs.

[436] Malcolm Darling, *Some Aspects of Co-operation in Germany, Italy and Ireland*, (Lahore, 1922).

[437] Banerjee, Besley, and Guinnane, "Thy Neighbor's Keeper"; Ghatak, and Guinnane, "The Economics of Lending with Joint Liability". This scholarship shows that the structure of Raiffeisen banks in nineteenth century rural Germany contained the fundamental principles for profitable group lending.

[438] Guinnane, "A Failed Institutional Transplant"; Guinnane, "Cooperatives as Information Machines"; Guinnane, "A 'Friend and Advisor'"; Colvin, and McLaughlin, "Raiffeisenism Abroad"; Colvin, "Banking on a Religious Divide". This scholarship demonstrates the benefits of localised membership, savings and supervision as the drivers of success in German and Dutch banks but failure in Irish cooperatives.

over-leveraged. Second, governments in Western Europe implemented regulatory and supervision structures that ensured cooperatives were well managed. In the context of high savings and strong regulation, members absorbed the risk of lending which not only allowed German and Dutch cooperatives to form a source of low-cost credit for peasants but also guaranteed their profitability and resilience to crisis.[439]

Table 5.1 Principles of a Raiffeisen cooperative

Feature	*Outcome*
Self-funded	Rich and poor save in banks. Defaults diminish savings.
Self-supervised	To prevent losing savings to bad loans, members identify creditworthy borrowers and enforce the repayment of loans through social sanctions.
Externally Regulated	Regulators hold managers accountable.

Source: Theoretical framework of Raifeissen cooperatives in Germany presented in Banerjee, Besley and Guinnane, "Thy Neighbor's Keeper"; Ghatak and Guinnane, "The Economics of Lending with Joint Liability".

Early to mid-twentieth century India presents a useful case study of cooperatives. Cooperatives were a state-driven initiative in India and the colonial government set up the first Indian cooperative in the Madras province in 1904. The success of rural cooperatives in Europe inspired this initiative. According to an Indian economist in the 1930s, 'the study of the small village banks in Germany towards the close of the last century attracted the attention of those who were eager to solve the problem of rural poverty.'[440] Policymakers in colonial and post-colonial India continued to invest their confidence in the cooperative movement as a solution to the credit problem. They believed that, 'great things were expected of the cooperative movement in India, on the analogy of its phenomenal success in Europe.'[441]

The chapter shows that the transplanted cooperative banking model did not perform well in South India. The cooperative sector grew exponentially in the early to mid-twentieth century. The size of the cooperative sector in 1950s Madras mirrored that of Germany at the turn of the

[439] Colvin, "Banking on a Religious Divide", emphasises the importance of religious institutions in supervising the allocation of loans thus protecting Dutch cooperatives from a banking crisis in the 1920s.

[440] Krishna K. Sharma, *The Indian Money Market*, (Bangalore, 1934), 63.

[441] *Report on Agricultural Indebtedness,* 58.

century.[442] However, cooperatives failed to displace the village moneylender. Managers of cooperatives selectively allocated loans and despite this selective allocation, the cooperative sector was unprofitable.

Why did the experiment fail to achieve its main aims? The chapter answers that administrators in late-colonial and early post-colonial India designed a cooperative model that differed from the European model in important ways. Prevailing political objectives prioritising equity over efficiency led to a cooperative structure operating with low savings and weak regulation. The regulatory problem ultimately led to exclusion of poorer peasants from accessing credit and over-leveraged cooperative banks.

What was the problem with regulation? The stylized model of Raiffeisen banking in Europe suggests that cooperatives could succeed because savings rates were high. In Madras, however, poor peasants did not raise enough capital while rich peasants refused to save in village cooperatives. Depositors were few and members cum borrowers were plenty, restricting the role of social capital and self-supervision as regulatory mechanisms. Contrary to the European model where poorly resourced banks could succeed if they were well regulated, cooperatives in rural Madras were regulated by administrative bodies which did not enforce competent banking regulation. The Indian government created the first Banking Regulation Act in 1949 and it did not cover cooperatives. Specific laws passed by the governments in the provinces regulated cooperatives in the colonial and early post-colonial period. Political and organizational interest overlapped, leading to the mismanagement of cooperative banks. Post-colonial Indian governments injected public money into the cooperative sector in the belief that this would increase credit access for poor borrowers. However, flaws in regulatory design persisted, allowing managers to falsify accounts, embezzle and insider-lend.

The chapter is divided into four sections. The first summarises the evolution and key features of the state-designed cooperative model in the province. The second traces the expansion of the cooperative sector and its lack of profitability in the early to mid-twentieth century. The third demonstrates that cooperatives were mismanaged because of low savings and weak regulation. The fourth shows that state financing in the 1940s sustained failing cooperatives but prolonged flaws in the sector's regulatory structure.

[442] Guinnane, "A Friend and Advisor"; 237, estimates that 19,000 cooperative banks operated in Germany in 1914. Over 17,000 banks operated in Madras in 1952.

5.2 Designing the Cooperative Model

The colonial government established credit cooperatives from 1904, however, these were not the first type of group lending arrangements in Madras. Mutual credit associations operated prior to the cooperative movement. Rotating credit and savings organizations were common in the Malabar district of western Madras in the nineteenth century.[443] Groups of peasants within villages collected their savings into Chit Funds. These funds were informal, organized and managed within groups of friends or relatives. One member of the group managed the fund and collected a minimum deposit from the other members. Once collected, the manager issued a chit, a form of negotiated instrument, that defined the contents of the fund. The manager provided loans, by discounting the chit, to one borrower at a time. This was done by auction or lottery. When auctioned, the fund provided loans to members that offered the highest discount rate. Alternatively, in the prize chit format, each member of the group discounted the chit, the order of which was random and defined by drawing from a lot.[444]

Mutual saving and credit associations were also common among colonial officers. British officials in Madras city and some town centres in the districts operated *nidhi* funds from the mid-nineteenth century.[445] These funds functioned similar to English Building Societies in the nineteenth century. Groups of friends or colleagues formed an informal association and each member contributed a portion of their savings each month to a fund. Managers of the fund allocated loans to members of the group at interest rates that were lower than the rates charged by moneylenders. The fund remained intact for a set number of months, after which it was liquidated and each member received a contribution larger than their investment. The share of the fund received depended on the size of the initial investment. *Nidhi* funds in Madras were started and operated by the British officers. Officials restricted participation in the *nidhis* to members of the government with fixed monthly incomes.[446]

The colonial government believed that Chit and *Nidhi* funds contained problems as they were unregulated and serviced a small portion of the wealthy population. These were informal associations and operated outside the sphere of government regulation. Government reports suggested that managers of these funds typically embezzled from them. The other members did not have laws or legal support to enforce repayments and punishments on the embezzling

[443] *Provincial Banking Enquiry,* 34-35.

[444] *Provincial Banking Enquiry,* 34-35.

[445] *Provincial Banking Enquiry,* 33.

[446] *Provincial Banking Enquiry,* 33.

managers.[447] Furthermore, these funds catered to a small section of the rural population. Poor peasants continued to rely on moneylenders for credit. As a result, serious discussions on establishing regulated competitors to moneylenders began in the late nineteenth century.

Colonial administrators began highlighting the cooperative banking structure, mirroring the one that operated in central Europe, as a solution to rural credit problems in late nineteenth century India. Following the Deccan Riots in 1874, William Wedderburn, a District Judge in the Sind province, circulated a proposal in 1882 for the creation of cooperative banks in India.[448] The British-ruled government rejected Wedderburn's proposal.[449] Instead, the government implemented the 1884 Agriculturists Loans Act, which allowed provincial governments to provide *Taccavi*, or short-term working capital loans, to rural cultivators. However, this was not at a large enough scale to make an impact.[450] Lawmakers sought alternative solutions to the problem of imperfect competition in credit markets. From the early 1890s, the government began re-considering cooperative banks as a potential solution. The provincial government in Madras commissioned Frederick Nicholson to compile a report on successful cooperative models in Europe.[451] Orchestrating a path for regulated finance to replace moneylenders was the central purpose of the report. According to Nicholson, 'the substitution of organized credit for that of the money-lender is a necessary development of civilisation.'[452] While Nicholson travelled to Europe to write on the cooperative banking model in the early 1890s, cooperative credit organizations emerged in select Indian villages. In 1894, groups of villagers pooled savings and provided loans at low interest rates in 64 villages in Mysore.[453] Similar banks operated in Punjab and the United Provinces in the 1890s and early 1900s. From the turn of the twentieth century, the government undertook the responsibility of establishing and regulating credit cooperatives.

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[447] Eleanor M. Hough, *The Co-operative Movement in India: Its Relation to a Sound National Economy,* (London, 1932), 50-52. Eleanor Hough was a doctoral candidate in George Washington University in the early 1930s. Hough wrote a thesis, involving a large amount of field work, on the failures of the cooperative movement in India.

[448] William Wedderburn joined the Indian Civil Service in 1860. Wedderburn's served in the judiciary until retirement in 1887. Wedderburn was a District Judge until 1885, and a judge in the Bombay High Court for two years thereafter. Following retirement, Wedderburn was a prominent political figure. Wedderburn and Allan Octavian Hume were founding members of the Indian National Congress. Wedderburn served as president of the party in 1889 and 1910.

[449] Hough, *The Co-operative Movement in India*, 52.

[450] Hough, *The Co-operative Movement in India*, 52.

[451] Frederick Augustus Nicholson, educated in the Royal Medical College and Lincoln College, Oxford, joined the Indian Civil Service in 1869. He was stationed in the Madras Presidency throughout his career and was promoted from the lower ranks of district administrator to member of the Legislative Council in 1897. Nicholson is credited for his reports on rural development including works on famine and banking. Colonial and post-colonial administrators refer to Nicholson as the 'father of the cooperative movement in India.'

[452] *Report Regarding the Possibility of Introducing Land and Agricultural Banks into the Madras Presidency*, (Madras, 1897), 3.

[453] Hough, *The Co-operative Movement in India*, 52.

This was not a bottom-up initiative. The government managed the size and scope of the cooperative movement in twentieth century India.

Nicholson eventually circulated the finished report to the Madras Legislative Council in 1895. In the report, titled 'Report on the possibility of introducing land and agricultural banks into the Madras Presidency', Nicholson used the survey of cooperatives in Europe to suggest the conditions required for the transplant of a similar banking experiment in India. Nicholson asserted support for rural cooperatives and concluded the report with the phrase 'Find Raiffeisen.'[454] Nicholson identified three essential principles of Raiffeisen cooperation in Europe. First, the membership of each cooperative bank remained small and localised. Second, cooperative banks were self-funded through members' savings deposits. Third, cooperative banks determined the creditworthiness of borrowers by 'personal character' rather than land or physical collateral.[455] Nicholson's report convinced the government of the benefits of cooperative banking.

The British-ruled government in India set up one more committee, under the leadership of Edward Law in 1903, to advise them on the ideal legal structure to support the development of cooperative banking.[456] Nicholson was part of the committee but retired from government service the year after, the same year that the British-ruled government designed laws that defined the conditions for the establishment of new cooperative banks. Following the recommendations of Edward Law's committee, the colonial government in India implemented the first Cooperative Societies Act in 1904, which it later amended in 1912. With the responsibilities of designing and enforcing laws came an expansion in the administrative machinery to support cooperatives. The government created Cooperative Departments at the federal level and in each of the provinces. The Registrar, typically a senior member of the Indian Civil Service, chaired the Cooperative Department in the provinces.

In India, cooperatives could not be formed without legal authorization. This authorization did not come from banking or company law. Laws executed by the Cooperative Department determined the guidelines for credit cooperatives to operate. Credit outfits operating within these guidelines could register, with the Cooperative Department, as credit cooperatives. Government and laws, therefore, were significant drivers of the growth of the cooperative movement in India. Indeed, Section 47 of the 1912 Cooperative Societies Act prohibited organisations other than those

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454 *Report Regarding the Possibility of Introducing Land and Agricultural Banks*, 185.

455 *Report Regarding the Possibility of Introducing Land and Agricultural Banks.*

456 Edward FitzGerald Law was a British diplomat in the late nineteenth and early twentieth century. The British government in India appointed Law as a financial advisor in 1900. Law advised the government on currency reforms and tax policies. In 1903, Law led a committee to determine the framing of laws that would ultimately govern cooperative banks in the early 1900s.

registered by the Cooperative Department from using the name 'cooperative.' The government framed the cooperative structure such that it could only develop under the control of the state.

In this context, the 1904 and 1912 Cooperative Societies Acts identified key principles for the registration of individual cooperatives. These did not change during the period.[457] The law differentiated between urban and rural cooperatives. Cooperatives were rural if 80 per cent of the members were employed in agriculture. To register a rural cooperative, the establishment needed a minimum membership of 10 people in the same village or town. If these requirements were satisfied, prospective cooperatives applied to the Registrar of the Cooperative Societies Department in the provincial government to register. Cooperatives could not form without the Registrar's approval.[458] If approved, the Registrar provided the new cooperatives a registration certificate. The new cooperative registered an official building address with the Cooperatives Department.[459] With the expansion in the number of cooperative banks in the early twentieth century came an increase in the number of employees in the Cooperatives Department. The Registrar appointed Assistant Registrars, who also had the power to register new cooperatives. By 1920, there were nine Assistant Registrars in the Cooperatives Department in Madras.[460]

When the laws were vague in instruction, they strengthened the legislative capacity of provincial government. On capital structure, for example, the 1912 Cooperative Societies Act defined the process for registration and requirements for share subscription, but did not specify financial linkages between cooperatives. Similarly, the Act did not contain details on the regulation of the cooperative banks. The Act provided vague instructions on the rights of members, using phrases such as 'mutual watch' to define management accountability. Sections 35 and 36 of the Act provided Registrars the powers to inspect and supervise the affairs of each cooperative and instructed managers to comply with the Registrar's enquiries. The provincial governments, under the Registrar's leadership, had the flexibility to mould the cooperative structure. Each cooperative had its own set of by-laws. Prospective cooperatives could not register unless the Registrar approved its by-laws.[461] The managers of cooperatives drafted these laws in accordance with guidelines provided by the Cooperatives Department. In other words, federal laws did not always design the cooperative structure. Provincial policymakers played a significant role.

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[457] In India, laws referred to cooperatives as 'banks' and 'societies.' The chapter follows this terminology and uses the terms interchangeably. Commercial banks did not lend in rural Madras before 1960.

[458] *A Short Introduction to Cooperation in the Madras Presidency, (*Madras, 1920), 11-12.

[459] Section 15, 1912 Cooperative Societies Act.

[460] *A Short Introduction to Cooperation in the Madras Presidency*, 11.

[461] *A Short Introduction to Cooperation in the Madras Presidency*, 11-12.

Eventually, the federal government delegated the power to legislate in the cooperative sector to the governments in the provinces. Following the 1912 Cooperative Societies Act, the colonial government set up a committee under the leadership of Edward Maclagan to make recommendations for the ideal policy structure to support expansion of cooperatives.[462] The committee suggested that the provincial governments take control of legislating in the cooperative sector. Five Years Later, and as part of the 1919 political reforms, the federal government officially delegated power to the provincial governments. The provincial governments enforced laws that regulated the cooperative movement. The government in Bombay enforced laws in 1925. The government in Madras, using the recommendations of the 1928 Townsend Committee report, implemented the Madras Cooperative Societies Act in 1932. Using examples of the initiatives taken in the provinces, the Maclagan Committee made recommendations for capital and management structure in the rural cooperatives. These were later included in the laws enforced by provincial governments. Did this model facilitate rural cooperation in Madras?

If the aim was to expand the supply of credit in villages, that aim was initially met to a small extent. Cooperatives accepted deposits from members and non-members, hoping these deposits would finance the expansion in credit supply.[463] By 1905, it became clear to policymakers that cooperatives struggled to raise savings from villages alone.[464] The government, still focused on expanding credit supply, created a three-tier banking structure to compensate for the low level of savings in villages. The provincial government established the Madras Central Urban Bank (MCUB) which accepted deposits from members and non-members in metropolitan Madras. The MCUB provided credit to primary banks.[465] The number of primary banks increased in the early twentieth century, exceeding the financial scope of the MCUB. The government created district banks to provide loans to primary banks in 1909. District banks were funded by three groups. First, members and non-members saved and owned shares in district banks. Second, primary banks deposited reserves into district banks. Third municipal and district level government departments saved public money in district banks. District banks did not lend to individual borrowers but exclusively to primary banks. As such, the cooperative three-tier structure included primary banks as creditors to cultivators in villages, apex district banks and an apex provincial bank

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[462] Edward Douglas Maclagan joined the Indian Civil Service in 1883. Maclagan was stationed in Punjab as Chief Secretary to the Government of Punjab, Secretary to the Revenue Department, Secretary to the Education Department, Lieutenant Governor and finally Governor of the province. Maclagan compiled the report on cooperatives while being the Secretary to the Revenue Department in 1914.

[463] Cooperatives, as per law, could only provide loans to members.

[464] *The Madras Co-operative Manual*, (Madras, 1921), 7.

[465] The MCUB later changed its name to the Madras Provincial Cooperative Bank.

as feeders to primary banks. The provincial bank played a comparatively insignificant role as the majority of lending from primary banks was funded by loans from district banks. Though operating beforehand, the Maclagan Committee recommended the three-tier structure to expand lending in rural areas. The 1932 Madras Cooperative Societies Act entrenched the three-tier structure. In developing this cooperative model, the government succeeded in expanding the supply of credit, but made internal supervision challenging, as a later section will show.

Table 5.2 Structure of cooperative banking in Madras

Organization c. 1930	*Role*
Government	Enforced laws and regulated cooperative banks.
Provincial Bank	Savings bank in the city. Provided a small amount of credit to district and primary banks.
District Bank	A savings bank for members, non-members, primary banks and local government. Provided credit to primary banks.
Primary Bank	A savings bank for members and non-members. Lending bank for members in rural villages.

The government supplemented the expansion in credit supply with rules that stipulated the participation of poor peasants in the management of primary banks. The government needed rich peasants to participate in order to keep savings high and cooperatives self-funded. Yet, it also needed to ensure that banks were not hijacked by richer cultivators that wielded greater social and political power in the country-side. The Cooperatives Societies Acts in 1904 and 1912 did not specify management structure.[466] The Registrar in Madras enforced rules on the election and supervision of cooperative bank managers. When prospective cooperatives fulfilled the guidelines to register, the Registrar or Assistant Registrar scheduled a meeting for the ten applicant members. The members voted in a governing board of five managers, or a *panchayat,* to manage the cooperative. The managers drafted by-laws and approved applications for new membership and loans.[467] Each *panchayat* included one president and one secretary. Once elected, managers were

[466] Hough, *The Co-operative Movement in India*, 86-87.

[467] *A Short Introduction to Cooperation in the Madras Presidency*, 11-12.

either honorary or professionally employed and paid an annual remuneration by the bank itself.[468] In the colonial period, primary banks held annual general meetings where members elected managers. Laws in the post-colonial period stipulated elections every three years. Though already operational for almost three decades, the 1932 Madras Cooperatives Societies Act entrenched these rules for the election of cooperative managers.

The provincial government in Madras established Supervising Unions in 1910 to ensure transparency in the management of primary banks. The provincial government grouped primary banks, that were in close proximity to each other, in Unions. The aim was for managers from one primary bank to supervise and advise managers from another. The government implemented this policy to avoid the additional expenses of appointing external supervisors.[469] Unions did not audit primary banks. The government undertook this responsibility in the 1920s, as discussed in a later section. Supervising Unions performed two tasks. First, Unions reviewed the lending operations of primary banks and reported on the profile of borrowers. Second, Unions judged applications made by primary banks for loans from district banks.[470] Unions submitted annual reports of primary banks to their district bank creditors. In theory, reports from Supervising Unions identified management problems, including banks where rich managers discriminated against poor peasants.

The caste system was one potential barrier to cooperation in the Indian countryside. The government considered the diversity of membership a vital determinant of the success of the cooperative movement. Official reports classified members of primary banks by religion and caste. Surveyors recorded six categories including, 'Non-Brahmins, Brahmins, Adi-Dravidas, Christians, Muhammadans and other classes.'[471] Reports that classified members by groups of 'Brahmin' and 'Non-Brahmin' attempted to create a clear distinction between socio-economic classes. Government officials considered Brahmins as richer landowners and lower castes as smallholders and tenants. According to one provincial report in 1929, 12 per cent of members were Brahmins, 63 per cent were 'Non-Brahmin' and 25 per cent were from other religions and castes.[472] The provincial government celebrated this outcome. From these numbers, there was diversity in the voting membership group of each primary bank. However, contrary to the government's view, the presence of diversity alone was not enough to suggest cooperation. External supervision was

[468] *Rural Credit Follow-up Survey*, 441.

[469] *The Madras Co-operative Manual,* 36.

[470] *Annual Report on the Working of the Co-operative Credit Societies Act 1929 (Madras, 1928-1939)*, 25-26.

[471] *Annual Report 1929*, 10.

[472] *Annual Report 1929*, 10.

needed to ensure one group did not discriminate against another. As subsequent sections will show, the Supervising Unions did not perform this role successfully.

We now turn to how the cooperative model performed.

5.3 Performance Puzzle: Expansion but Unprofitable

By all measures, the size of the cooperative banking sector increased by a significant margin during the first half of the twentieth century. Between 1907 and 1929, the number of cooperative banks increased from 63 to 15,238.[473] By 1952, there were 17,201 primary banks where 16,616 banks operated with unlimited liability and 88 banks operated with limited liability.[474] Membership, total working capital and the value of loans provided by primary banks more than doubled between 1928 and 1953. Total membership in primary banks increased from 652,285 in 1929 to 1,537,000 in 1953.[475] The number of district banks remained stagnant at between 14 and 16 throughout the period, whereas the number of primary banks linked to each apex bank doubled between 1940 and 1955.[476] There was also a rise in the average number of members per primary bank between 1928 and 1955.[477] The Rural Credit Survey estimated that primary banks had an average membership of 88 in the 1950s.[478] This was lower than similar estimations in nineteenth century Germany.[479] The rise in the number of village banks was supplemented by a rise in membership, implying that there was an increase in the number of cultivators with access to cooperatives.

The price of credit from cooperatives was an added success. Cooperatives charged lower interest rates than moneylenders. The government enforced a ceiling on the interest rates charged by primary banks. Rates fluctuated between 7.5 and 9.5 per cent per annum in the early 1930s. As discussed, moneylenders in the same period charged rates of 2 per cent per month. Under these conditions, the data suggests that there was an expansion in the supply of low-cost credit during the early to mid-twentieth century.

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[473] B. V. Narayanaswami Naidu, "The Co-operative Movement in the Madras Presidency." *Indian Journal of Economics* 14 (1934), 426.

[474] *Rural Credit Survey*, 220; *Report of the Committee on Co-operation in Madras*, (Madras, 1956), 425.

[475] *Annual Report 1928-1939*; *Report of the Committee 1956*.

[476] *Report of the Committee 1956*, 425.

[477] *Annual Report 1928-39*; *Report of the Committee 1956*.

[478] *Rural Credit Survey Vol. II*, (Bombay, 1954), 216.

[479] Guinnane "A Failed Institutional Transplant", shows that the average membership size of Raiffeisen cooperatives in Germany fluctuated between 75 and 200.

It is surprising then that cooperatives failed to capture a sizeable share of the credit market. A survey in 1935 estimated that credit from cooperatives accounted for just 6 per cent of all loans to cultivators.[480] A similar report in 1956 provides a figure of just 3 per cent across India while confirming similar results for the market in Madras.[481] B. V. Narayanaswamy Naidu, a provincial legislator in the Madras government, suggested that 7.9 per cent of rural households were members of credit cooperatives in the mid-1930s.[482] Similarly, 23.5 per cent of the provincial rural population were, 'within the fold of rural credit cooperatives', with a small share of this group actually borrowing from cooperative banks in 1956, demonstrating that the lack of market penetration persisted throughout the period.[483]

Cultivators did not benefit equally from the expansion of cooperative credit. Borrowers were concentrated in a small sub-section of the rural population. Primary banks selectively allocated loans to richer peasants. Government reports in the 1950s recognized this problem. According to the Rural Credit Survey, 'small owners, tenants-at-will and labourers, the cultivators of areas with poor rainfall and the backward agricultural communities are hardly members of societies.'[484] Data on loan sizes and collateral requirements on those loans signal the income profile of borrowers. Loans exceeding 250 rupees accounted for nearly half of all cooperative credit provided in 1929 and 1956.[485] Loans from moneylenders were significantly smaller, suggesting that moneylenders rather than cooperatives were servicing the credit needs of the poor. Indeed, from a survey of moneylender-serviced credit markets in six villages in the Bellary district, the average debt per acre was 17 rupees in 1930.[486] Assuming the size of loans increased proportionally to the size of land ownership, these numbers suggest that cooperatives showed a preference for high income borrowers.

Furthermore, cooperatives shifted from non-asset-based to mortgage lending from the 1920s. In the mid-1920s, mortgages accounted for 40 per cent of loans while borrowers accessed the majority of cooperative credit by attaching a co-signer to their loan applications. By 1938, 60 per cent of loans were secured by mortgage instruments. The government recognized that this was a departure from the original aims of the cooperative movement. Commenting on foreclosures in

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480 *Report on Agricultural Indebtedness*, 40.

481 *Report of the Committee 1956*, 41.

482 Naidu, "The Co-operative Movement", 420.

483 *Report of the Committee 1956*, 40.

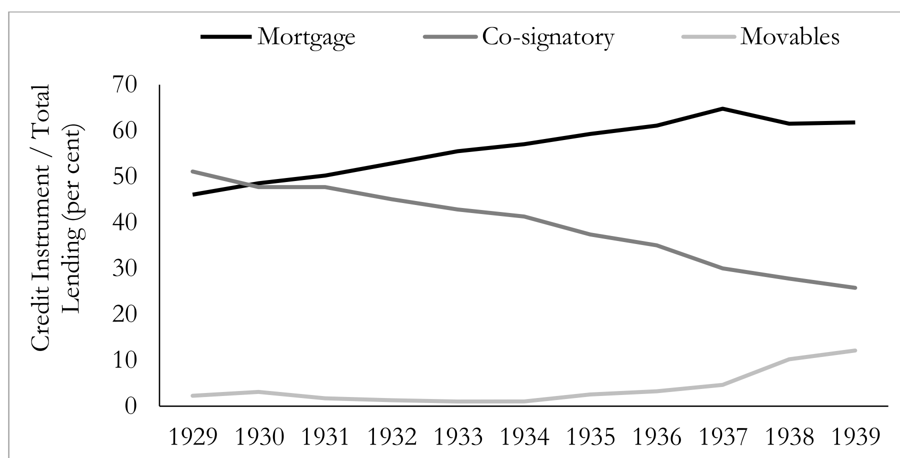
484 *Rural Credit Survey*, 223.

485 *Provincial Banking Enquiry*, 152; *Report of the Committee 1956*, 29.

486 *Provincial Banking Enquiry*, 62-63.

1936, the Cooperative Department in Madras stated, 'these properties are undoubtedly a source of embarrassment to societies and it must be their anxious concern to dispose of them in consultation with their financing banks at the earliest opportunity.'[487] Cooperatives that acquired land from their members contradicted Nicholson's principles of Raiffeisen banking. Collateral requirements excluded poor peasants from accessing cooperative credit.

Figure 5.1 Security on loans, 1928-1939



Source: *Annual Report 1928-1939*.
Notes: Figure shows the value of loans attached to three credit instruments. Mortgage refers to loans secured by land. Co-signatory refers to loans contractually secured by third-party guarantors. Movables refers to loans secured by crop. The source provides the total volume of lending by primary banks in a given year, disaggregated to the volume of loans under the three types of credit instrument in a given year. Ratios calculated and converted to percentage in the source.

The Great Depression explains the shift from co-signatory lending to mortgages.[488] The co-signatory method proved unsustainable during the 1930s crisis. Repayment rates were generally low in cooperatives. From loans issued in the late 1920s, primary banks declared 30 per cent of expected interest inflows as overdue. As illustrated in Figure 5.2, recovery rates continued to decline as overdue interest increased by a further 30 per cent between 1930 and 1934. Primary banks shifted to mortgage lending in the hope that auctioning the land acquired from defaulters would help mitigate losses. The colonial government enforced rules that ensured each cooperative limited the total value of loans to the net value of properties held in the cooperative's possession.[489] Cooperatives enforced this parameter to moderate the difference between the value of the properties securitised and the value of overdue loans. The rules entitled cooperatives to liquidate

[487] *Annual Report 1936*, 12.

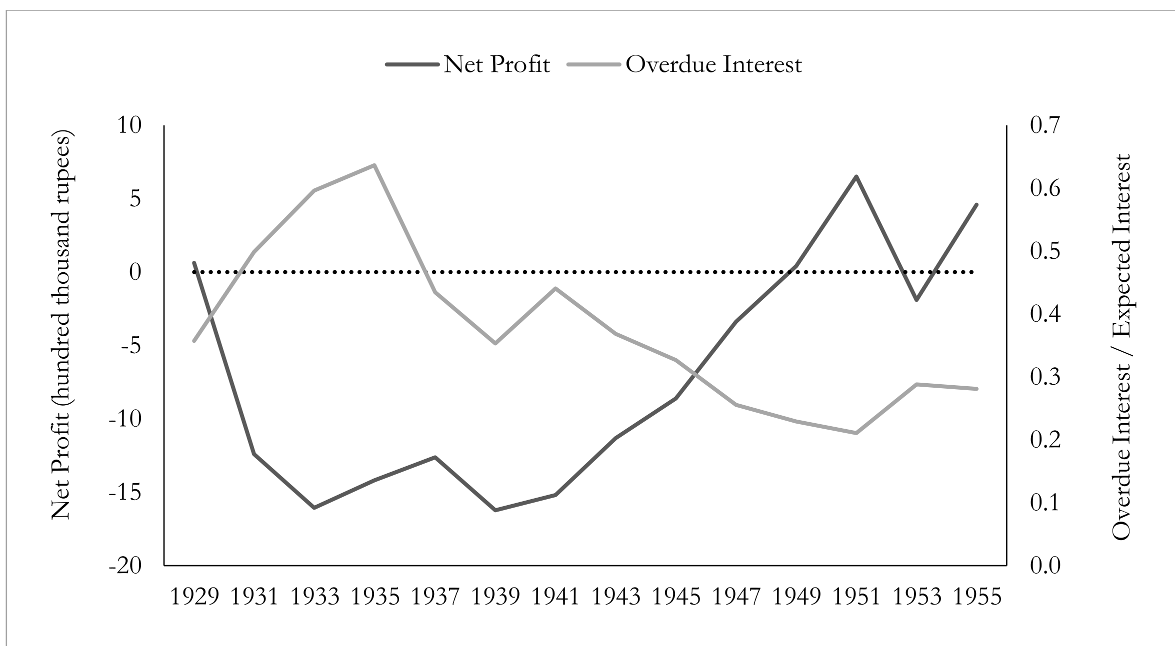
[488] Homogeneity in the occupation of borrower members spread the impact of the crisis. Cultivators constituted 89.1 per cent of the total membership of primary banks (*Annual Report 1929,* 9). The commodity price crash in the early 1930s led to a rapid short-term decline in the membership of primary banks (*Annual Report 1929-1934).*

[489] *Provincial Banking Enquiry*, 151.

properties in times of default. The provincial government expected cooperatives to generate positive net balances by auctioning land they acquired from defaulters.

The recovery from the Depression started from 1937. Membership in primary banks increased by 2.6 per cent between 1937 and 1938, with a larger increase of 8.3 per cent in the following year. Primary banks expanded lending operations in the same period. The value of loans provided by primary banks in 1939 was 1 per cent shy of the same measure in 1929. This was supported by rising commodity prices in the early 1940s.[490] However, cooperatives did not fully recover from the crisis. As demonstrated in Figure 5.2, primary banks reported net losses until 1950. The upward swing in commodity prices and the shift to mortgage lending had a limited impact on the profitability of cooperative banks. Why did cooperatives endure losses despite the move to more selective lending?

Figure 5.2 Profitability of primary banks, 1929-1955



Source: *Annual Report 1928-1939; Report of the Committee 1956,* 425-435.
Notes: Figure shows that primary banks made losses throughout the period. The government collected data from each primary bank and aggregated this to the provincial level in the source. Profit and loss calculations made by the author. 'Net Profit' takes the difference between divisible profit and non-recouped loss in a given year. Net Profit plotted on the left y-axis. The dotted line indicates when primary banks break-even. 'Overdue Interest' is a calculated in the source and plotted on the right y-axis. It measures default rates in a given year by estimating the ratio of unpaid interest to total interest obligations. For example, in 1934 the ratio of overdue interest to interest due was 0.64, which means that primary banks only recovered 36 per cent of their expected interest inflows that year.

One potential answer is that cooperatives were constrained by enforcement costs. Institutional barriers prevented banks from acquiring land in a timely and cost-efficient manner. Land transfer

[490] Michelle McAlpin, "Price Movements and Fluctuations in Economic Activity (1860–1947)," in *The Cambridge Economic History of India*, edited by Dharma Kumar and Meghnad Desai, (Cambridge, 1983), Appendix Table 11A.1.

required the ratification of legal authority while court disputes were lengthy and expensive.[491] The colonial government created a legal structure, for cooperative banks, that functioned outside the scope of civil courts. The 1932 Madras Co-operative Societies Act specified that cooperative disputes were to be resolved by representatives of the Registrar, as chair, of the cooperative department in the provincial government.[492] The government created special arbitration courts within districts to enforce land transfers following defaults.[493] These forums failed to solve the problem. The rising number of pending disputes in the early 1930s triggered concerns among policymakers that arbitration courts were also a costly and inefficient method of enforcing repayments.[494]

The parallel functioning of courts and special arbitration forums, chaired by the Registrar of the Cooperatives Department in government, led to conflicts between the judiciary and executive, ultimately causing enforcement inefficiencies. Borrowers that defaulted on loans to cooperatives commonly also defaulted on tax bills and loans to moneylenders. Different courts adjudicated each of the cases, leading to confusion on how best to enforce repayments. In *Govada Balabharathi Co-operative Credit Society Vs. Alapati Venkatakrishnayya*, for example, a borrower defaulted simultaneously on loans to a cooperative and a moneylender. The arbitration forum ordered for the borrower to transfer land to the cooperative while the civil court independently ordered for the transfer of the debtor's land to the moneylender. This motivated debates on whether 'the Registrar deciding cases under sections 51 of the Act is a court.'[495] Borrowers regularly questioned the decisions made by the special arbitration forums in civil courts. The outcome was a complicated enforcement structure that was a barrier to the efficient execution of mortgages. According to one report, 'the Government do not tend to lessen the difficulties of societies which have obtained decrees against defaulters and are executing them through the department.'[496] This conflict contributed to the inefficiency of arbitrations between cooperatives and defaulters. Land transfers were difficult to execute in the informal and cooperative credit markets.[497]

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[491] Roy and Swamy, *Law and the Economy*.

[492] Section 51 of the Madras Cooperative Societies Act (VI of 1932).

[493] Arbitration forums were the preferred formal forums of appeal for banks and defaulters. The number of cooperative disputes in arbitration forums exceeded appeals in Civil Courts by a significant margin in the 1930s.

[494] *Annual Report 1937,* 10.

[495] *Madras Journal of Co-operation 1935*, 560.

[496] *Madras Journal of Co-operation 1935*, p. 562.

[497] Cooperatives struggled to auction the land they did acquire during the Depression period. Land markets were sluggish in the crisis years as cultivators did not invest in buying land. The acquired lands typically went idle under the ownership of the cooperatives. Primary banks were forced to bear the costs of maintaining the lands they acquired. See *Annual Report 1937*, 10-11.

Some primary banks responded to the enforcement problem by collateralising commodities instead of land. Though capturing a small share of lending operations, Figure 5.1 shows that the number of loans against crop security increased six-fold between 1936 and 1939. The 1930s saw a rise in the registration of Loan and Sale Societies. These primary banks provided loans collateralised by commodities. When borrowers defaulted, the primary banks stored the commodities and traded them on the market. To mitigate the risk of price fluctuations, the primary banks provided working capital loans valued at 60 per cent of the borrower's produce prior to the harvest.[498] Primary banks collateralised the storage receipts of the warehoused commodities to obtain loans from district banks.[499] This arrangement became more popular in the late 1950s. Credit and marketing primary banks were more rigorously differentiated from each other in this latter period.

However, enforcement barriers do not fully explain losses in the cooperative sector. According to Nicholson's prototype, self-help should have substituted external enforcement in the first instance. The requirement for courts in itself represents a failure in cooperation among members. The next section of the chapter shows that cooperatives shifted to mortgage lending and incurred persistent losses because of flaws in capital structure and regulatory design.

5.4 Low Savings and Weak Regulation

Primary banks were not self-funded and borrowed from district banks to fund their lending operations in Madras. High savings in district banks and low savings in primary banks entrenched a banking structure of debt dependence. As a result, primary banks were poorly regulated. Low savings restricted the capacity for mutual supervision in primary banks. Top-down regulation did not substitute for the absence of this bottom-up supervision. As mentioned before, the entire banking system in India did not have a formal regulator until the 1949 Banking Regulation Act, and even that act did not cover cooperatives.[500] The outcome of the flawed design, this section demonstrates, was weak regulation and mismanagement.

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[498] *Report of the Committee on Co-operation in Madras*, (Madras, 1928), 14.

[499] *Report of the Committee 1956,* 8-9.

[500] The 1949 Banking Regulation Act was modified to include cooperatives only in 1965. For laws and private banking in the colonial period, see Roy and Swamy, *Law and the Economy.* For a discussion on the Banking Regulation Act, see Autar K. Koul and Mihir Chatterjee, "International Financial Institutions and Indian Banking: a Legal Profile" in *India and International Law,* edited by Bimal N. Patel, (Leiden, 2008).

Figure 5.3 Capital structure of the cooperative sector, 1930-1960

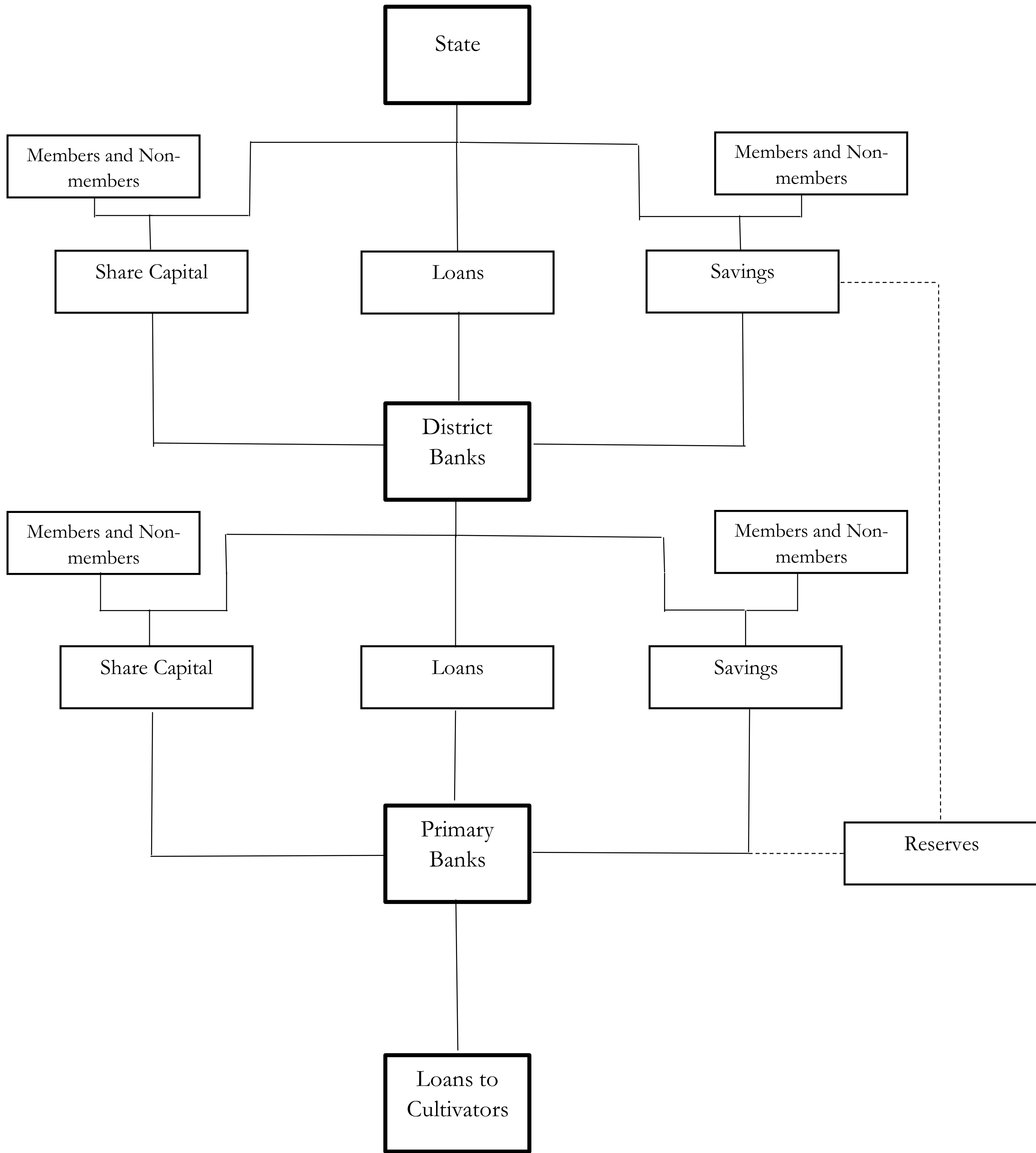
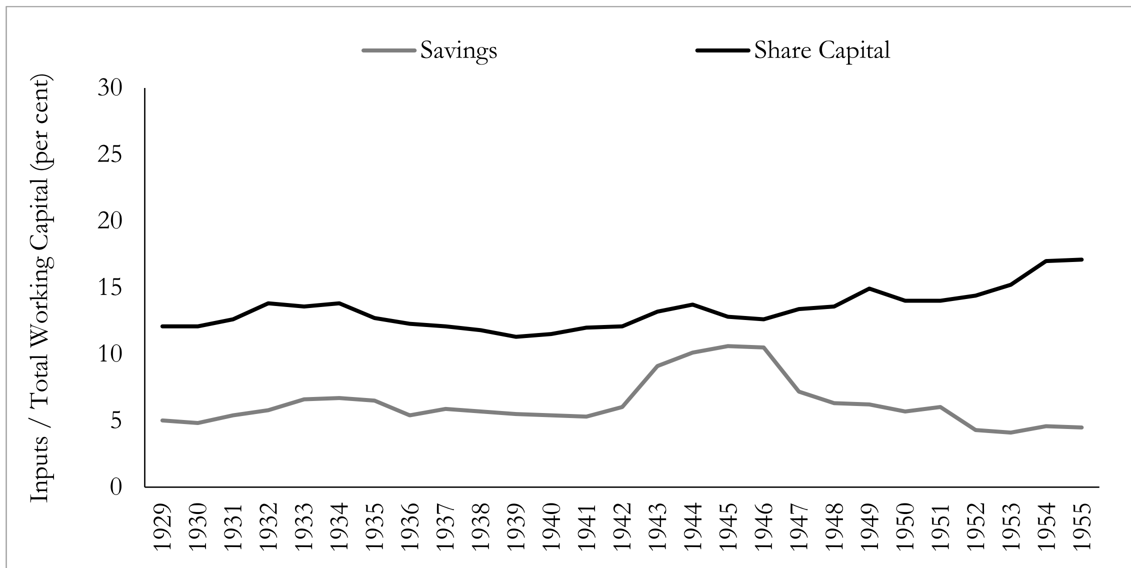


Figure 5.4 Ratio of savings and share capital to working capital in primary banks



Sources: *Annual Report 1928-1939*; *Report of the Committee 1956*.
Notes: Figure shows savings and share capital constituted a small share of the working capital in primary banks. The sources provide data on the total working capital of primary banks with the value of savings, investment and debt. For ease of comparison, the author rounds all numbers to the nearest ten-thousand. The reports exclude data from the Ganjam district in 1936-37. Data scope shifts from 'composite' to 'residuary' state in 1953 to reflect the changing of state borders after independence. These two factors do not bias the results in any way.

Figure 5.3 sketches the multi-layered banking structure of cooperatives in Madras. This banking structure operated throughout the period. However, the volume of capital flows between the layers changed in the late 1940s. From 1905 to the end of colonial rule, capital flowed in a two-tiered structure, between district banks and primary banks. As previously discussed, the provincial apex bank did not play a significant financial role in the cooperative movement. Primary banks were funded by savings deposits, investments in share capital and loans from district banks. District banks were funded by savings deposits and investments in share capital. Loans from government constituted a small share of cooperative operations. Governments financially participated by saving in district banks in the 1930s and early 1940s. As a subsequent section will show, the role of government changed in the late 1940s. Government loans to district banks increased exponentially from 1947 onwards. While the three-tier capital structure did not change much, the top-tier played a more significant role in the post-colonial period.

As illustrated in Figure 5.4, primary banks in Madras raised most of their working capital through external borrowing.[501] Loans from district banks financed between 70 and 80 per cent of

[501] There was a decline in this ratio during the 1930s which is explained by the rise in the reserve funds of each society. The ratio of external borrowings declined from 74 to 60 per cent between 1928 and 1935, coinciding with a rise in the ratio of the reserve fund from 6 to 16 per cent in the same period. Banks were either liquidated or more risk-averse during the Depression. The temporary decline in the ratio of external borrowings in the 1930s does not infer greater self-sufficiency.

the required working capital in primary banks. Members' and non-members' deposits accounted for between 5 and 11 per cent of total working capital. The ratio of savings to loans presented similar results. The volume of savings in primary banks was between 4 and 11 per cent of the volume of lending throughout the period. Share capital played a marginally more important role than savings in primary banks. However, share capital included investments from members and district banks. The majority of this investment was from district banks in the 1930s, accentuating the external funding problem.[502]

Why were savings low in primary banks? Colonial officials maintained that peasants were ill-informed about the benefits of saving such that disposable income was rarely saved and instead spent on extravagant ceremonies.[503] In practice, savings rates were low because harvest failure was common and cultivation was unprofitable in bad years. An indirect confirmation of the claim that volatile seasonal incomes depressed rural savings is that the ratio of saving to working capital was higher in urban cooperatives during the same period.[504]

When the rich did have money to save, they did not deposit their savings in primary banks. Wealthy cultivators either allocated their disposable income in the credit market as moneylenders or to deposits in district banks. According to Panikar, '90 per cent of rural credit (in the 1950s) seems to come from the saving of rural families.'[505] Moneylending presented a more lucrative option to saving. As mentioned, there was a gap between the interest rates charged on loans from moneylenders and those offered by cooperative banks. When money was being saved, cultivators chose to deposit in district rather than in primary banks. There was a marked increase in the number of individual depositors in district banks in the late 1920s.[506] The ratio of savings to loans in district banks was significantly higher than the same ratio in primary banks. At the peak of the Depression in 1933-34, savings deposits accounted for 62 per cent of the total working capital of district banks. A combination of share capital and savings contributed 72 per cent of total working capital in the same year.[507]

Rich peasants chose to save in district banks because, based on the government's design, the deposits of members and non-members in district banks had a stronger guarantee than deposits in primary banks. Individual depositors were not the only savers in district banks. Local

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502 *Annual Report 1936*, 30-31.

503 See Darling, *The Punjab Peasant.*

504 *Annual Report 1928-1939.*

505 Panikar, *Rural Savings in India,* 59.

506 *Annual Report 1936*, 19.

507 *Annual Report 1934*, 24.

government departments saved as did groups of primary banks. The colonial government framed laws to ensure that primary banks maintained a reserve ratio, physically deposited in district banks. According to the laws, primary banks deposited this 'statutory contribution' in the district bank that they were indebted to.[508] This required reserve increased the value of deposits in district banks. When primary banks defaulted on loans to district banks, the reserve fund diminished before savings. Moreover, groups of primary banks borrowed from and deposited reserves in one district bank. District banks offset the defaults from one primary bank with the reserves of another.[509] District banks also restricted the volume of lending to failing primary banks. Indeed, district banks maintained higher reserves and reduced lending to primary banks in the 1930s.[510] Deposits from primary banks and risk-averse lending in crisis years, both enforced by government regulation, protected member and non-member deposits in district banks.

The Depression had a larger impact on primary than on district banks. Between 1929 and 1939, district banks reported a decline in net profits from 1.1 million rupees to just over 300,000 rupees. In the same decade, primary banks transitioned from earning a net profit of 60,000 rupees to reporting net losses of 1.62 million rupees.[511] Reserves and higher savings in district banks moderated the transmission of primary bank losses up the cooperative ladder. The combination of share capital, savings and reserve deposits constituted 77 per cent of the total working capital of district banks in 1933-34.[512] Deposits insured defaults, restricting losses incurred. In contrast, primary banks were funded by external borrowing. Defaults were high and deposits were small, leading to persistent losses.

Low savings posed a problem for supervision in primary banks. Members of cooperative *panchayats*, including presidents and secretaries, were commonly neither savers nor shareholders. The incentive for self-contained supervision diminished as the burden of default was not borne by the deposits or share-capital of governing members. According to Eleanor Hough's thesis on the management of Indian cooperatives in the early 1930s, 'the cooperative safeguards of mutual watchfulness and supervision are absent and everything depends on the committee's honesty and business ability'.[513] This problem persisted throughout the period. On the management of primary banks, the Rural Credit Survey in 1954 reported that, 'there is a paucity of members who are

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508 *Annual Report 1930*, 16-17.

509 *Annual Report 1936*, 19.

510 The volume of district bank to primary bank loans halved between 1929 and 1935 (*Annual Report 1929-1935*).

511 *Annual Report 1928-1939*.

512 *Annual Report 1934*, 50-51.

513 Hough, *The Co-operative Movement in India*, 60.

actually cultivating lands themselves. The agricultural finance by the co-operatives would be more efficient and smooth if ways and means are devised to secure invariably the presence of some actual cultivators on the board of management.'[514] The employment of professional managers rather than shareholders resulted in a lack of monetary incentives to increase the profitability of primary banks. The provincial government reported the following in 1929,

> Though the objects of co-operative banks and commercial banks may be different, the one seeking to increase the shareholders' profit being ruled by shareholders who have generally no other interest in the concern, while the other seeks to benefit the borrower shareholder, whose interest as borrower is far greater than his interest as shareholder.[515]

In other words, the governance structure in primary banks did not foster sound management through self-regulation.[516]

Supervising Unions did not solve the problem either. The number of Unions did not match the size of banking operations. An estimated 8,191 primary societies were affiliated to 262 supervision unions, at an average of 31 banks per union, in 1937.[517] The 262 Supervision Unions employed 432 supervisors in 1937. Furthermore, the ratio of banks to employees in unions amounted to 19 banks per individual supervisor in the same year. Each supervisor monitored the operations of 19 primary banks in the late 1930s, leading to inefficiencies in oversight. These inefficiencies increased transaction costs for members and primary banks. Primary banks underwent lengthy administrative processes before the disbursement of loans. The demand for credit, in turn, involved elaborate applications from participating members. Supervising unions often vetted these. Similarly, loans from apex banks were conditional on applications from primary banks which were again open to scrutiny from unions. The subsequent delays in the processing of loans conflicted with the seasonal demand for credit from cultivators.[518] According to the Provincial Banking Enquiry, 'So long as all this process is essential and it is essential for every loan that is applied for and sanctioned by the central bank it is useless to expect cooperative societies to meet

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514 *Rural Credit Survey*, 263.

515 *Annual Report 1929*, 17.

516 One barrier to self-regulation could have been illiteracy. Members needed a basic understanding of loan accounting and contracts to effectively supervise banks. However, certain institutional arrangements solved the problem in Madras. The Provincial Banking Enquiry reported in 1930 that cultivators approached local school teachers and clerks competent in simple accounting methods to assist in analysing loan documentation. Moreover, the provincial government established cooperative training institutes in districts. The institutes provided free assistance to illiterate members.

517 *Annual Report 1937*, 25.

518 See Roy, "The Monsoon", for the seasonal reliance of the rural credit market in India

the entire cash requirement for financing agriculture.'[519] The inefficiencies in supervision further restricted savings in primary banks. Unions monitored savings withdrawals to ensure primary banks remained liquid. Depositors needed to make applications, which were vetted by Supervision Unions, to withdraw their savings from primary banks. This was a time-consuming process. According to one government report, 'no one will put his money in a savings bank deposit if it takes a month or two to get the money back.'[520]

Moreover, there were conflicts of interest between the supervisors and primary bank managers. The government did not design Unions to hire external supervisors. Officials were concerned that external supervision would lead to the cooperative movement departing from its aims of being self-contained within villages. In his capacity as President of one primary cooperative in Madras, Deivasikhamani Mudaliar stated in 1937, 'for the efficient administration of village societies local knowledge and help is essential. The money lent to the villagers can be recovered easily only with their help. Nothing can be done in a village without the help of the villagers.'[521] Accordingly, the government implemented policies to ensure that supervision remained within the scope of the managers of primary banks. Members of Supervising Unions constituted representatives from the *panchayats* of primary banks. As a result, the governance structure of Supervising Unions extended, rather than corrected, the lack of management accountability in primary banks. Supervising unions, as recorded in an official report in 1935, 'cannot be independent and disinterested bodies, as they are run mostly by representatives of the very societies, which have to be supervised. Is it any wonder then that the supervisor is often forced, if he is to keep his job, to collude with the managements of credit societies in all their misdemeanours?'[522]

The reference to misdemeanour is significant. The government supplemented supervision with annual audits of primary banks. Audits were initially voluntary and paid for by the banks themselves.[523] This changed with the rising number of defaults in the late 1920s. From the early 1930s onwards, annual government audits were compulsory for all primary banks. Regular audits exposed the frequency of fraudulent lending practiced by the managers of primary banks. The frequency of management fraud became more apparent during the Depression. According to one

[519] *Provincial Banking Enquiry*, 155.

[520] *Annual Report 1928*, 20.

[521] *Madras Journal of Co-operation 1936*, 510.

[522] *Report on Agricultural Indebtedness*, 60.

[523] Section 17 of the 1912 Co-operative Societies Act allowed for *panchayats* to conduct the audit of banks.

official report in 1931, 'in the prevailing tightness of the money market defaulting secretaries were no longer able to restore the stolen funds on the approach of an inspection.'[524]

Auditors provided certificates to all banks at the end of every audit. Certificates contained a grade, running from 'A' to 'D'. Government auditors branded Class A banks 'thoroughly good societies' while class D banks were 'bad societies which probably have to be liquidated.' In the financial year 1932-1933, the government audited 13,425 banks, of which 1735 banks were in the 'D' group.[525] Auditors carried out additional scrutiny on banks with the largest defaults to identify areas of mismanagement or, in severe cases, fraud. In the same year, 77 cases of fraud were pending criminal prosecution. Arbitration forums charged 87 individuals in total, of which 77 were in management positions in primary banks.[526] There were consistent numbers of criminal prosecutions for the misappropriation of funds throughout the 1930s. As recorded in 1936, 'There are no signs of diminution in cases of defalcation; the department does its best to purge the movement of dishonest members but obviously can do little unless honest men come forward to run the societies.'[527]

On discovery of misconduct, employees from district banks or the provincial government superseded the management board of the mismanaged primary bank. In 1935, audit reports from the Krishna district exposed mismanagement in a regional cluster of primary banks. Employees from its financing district bank, the Krishna District Co-operative Bank, subsequently took control of the management of these banks.[528] The Krishna District Co-operative Bank placed a cap on new deposits and enforced more extensive application procedures for withdrawals of existing deposits from its member primary banks in 1936. In the absence of adequate reserves and increasing withdrawal applications, the district bank showed concern that 'the whole movement will lose credit.'[529] Following the supersession, the provincial government liquidated banks that failed to achieve a grade above 'D'.

Managers practiced two types of misconduct, one more serious than the other. The first, and less serious of the two, was insider lending. Evidence shows managers provided loans to members of the same caste. The social composition of management boards in the cooperative sector in the North Arcot district in the early 1920s provides evidence of this form of discriminatory lending.

[524] *Annual Report 1931*, 17.

[525] *Annual Report 1933*, 8.

[526] *Annual Report 1933*, 14.

[527] *Annual Report 1936*, 17.

[528] *Madras Journal of Co-operation 1935*, 324.

[529] *The Madras Journal of Co-operation*, (Madras, 1935), 272.

There were 30,000 members of primary banks in the district, 2700 or 9 per cent of which were Brahmin. According to one report, 6 out of 7 directors of the district bank and 12 out of 14 supervisors of primary banks were from the Brahmin caste.[530] The managers of primary banks in the district allocated the majority of loans to Brahmin members, while default rates saw a steady increase in the 1920s. By the early 1930s, the government liquidated 11 out of 30 Supervising Unions in the district for 'inefficient supervision and mismanagement of affairs.'[531]

The second type of management malpractice was embezzlement. Bank managers siphoned money for personal benefit. Legal records from the 1930s provide evidence of managers who issued loans either to themselves or to a network of their relatives. In the 1933 dispute *Re: Patri Venkata Hanumantha Vs. Unknown,* for example, the Secretary of a cooperative in the Guntur district was found to have issued large sums to either himself, his brother or his cousin in regular intervals in the late 1920s and early 1930s. Managers forged contracts, declaring fake names and mortgage securities. Borrowers did not repay loans and managers declared these loans as unrecovered principal in the bank's account books. The prosecution argued that 'while the depletion in the resources of the bank was taking place on account of the series of misappropriations slyly committed by the 1st accused, the financial equilibrium of the bank became patently unstable and on account of the large overdues there was pressure from several quarters.'[532] Recipients of loans, including the Secretary of the bank, were indicted with prison sentences of 10 years while those convicted of abetting the crime were charged with 7-year imprisonments.[533]

Managers channelled embezzled capital into two forms of expenditure.[534] First, managers embezzled to fund election campaigns. Elected administrators of cooperative banks were also candidates for elections in local governments. According to one administrator's address at a Co-operative Conference in 1935,

> office bearers of co-operative societies have been found in several places to have used co-operative money obtained by means of *benami* (embezzling by lending to kin or third party)

[530] Directors of Supervising Unions were appointed from directors of primary banks in the district.

[531] *Madras Journal of Co-operation 1936*, 88.

[532] Re: Patri Venkata Hanumantha vs Unknown, (1934 66 MLJ 193, Madras, 6 October 1933). Case records report similar methods of misappropriation throughout the period. In the case, Most Revd. Dr. L. Mathias, S.C., the Archbishop of Madras and the President of the Catholic Indian Association and anr. Vs. Kilacheri Agricultural Co-operative Bank (1938 1 MLJ 241, Madras, 5 October 1937), the secretary of the Kilacheri Agricultural Co-operative Bank accepted deposits on behalf of the bank. The secretary subsequently embezzled these funds.

[533] Re: Patri Venkata Hanumantha vs Unknown, (1934 66 MLJ 193, Madras, 6 October 1933).

[534] Managers who embezzled might have also channelled additional income into savings. However, this is not reported in the evidence.

> or direct loans for the purposes of their elections in Local Bodies or Legislatures. It is a tragedy; the result is that they find difficulty in repaying the same.[535]

Managers provided loans to supporters of some political groups but not others. According to a legislator in 1935, 'faction, favouritism and nepotism,' was a frequent feature in the administration of primary banks.[536] Cooperatives became a platform to launch political ambitions from the early twentieth century. According to Robert, members of the Justice Party and the Indian National Congress in the 1920s and 1930s had strong links to the cooperative movement.[537] Lending for political gain persisted throughout the period. An official report in 1956 commented that, 'local rivalries and factions tend to assume disproportionate importance and affect adversely the working of societies.'[538]

Bank managers embezzled to lend at high interest rates in the informal credit market. Members of the managing committee were either 'trader, moneylender or shopkeeper' in 7 out of 19 surveyed primary banks in the Coimbatore district in 1957.[539] Similarly, members of the management board were moneylenders in 8 out of 19 surveyed banks in the West Godavari district. The Rural Credit Survey reported that the vested interests of administrators cum moneylenders 'worked against the interests of the society' they were managing.[540] From the recorded banks in Table 5.3, the report on bank W3 in the West Godavari district stated that the 'President was very powerful and used to take *benami* loans – traders and landlords were on the managing committee.'[541] The bank reported a 100 per cent ratio of overdue repayment to outstanding loans. The government disbarred the bank from lending in 1954. Similarly, the Rural Credit Survey also reported the following on a primary bank in the Coimbatore district,

> Society C5, organised in 1919, was dominated by landowners. The ex-president misappropriated funds by making unreceipted collections. Since then, the members lost confidence in the society which gradually stopped functioning. Improper management, lack of proper supervision and timely help from the central bank and Co-operation Department resulted in misappropriation and consequent deterioration in the financial position of the society.[542]

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[535] *Madras Journal of Co-operation 1936*, 366.

[536] *Report on Agricultural Indebtedness*, 60.

[537] Robert, "Agricultural Credit Cooperatives in Madras".

[538] *Report of the Committee 1956*, 34.

[539] *Rural Credit Follow-up Survey*, 446.

[540] *Rural Credit Follow-up Survey*, 446.

[541] *Rural Credit Follow-up Survey*, 731.

[542] *Rural Credit Follow-up Survey*, 363.

Table 5.3 Survey of primary banks in two districts, 1956-1957

District	*Banks*	*Legible Accounts*	*Erroneous Accounts*	*Failed Audit*
Coimbatore	19	9	10	8
West Godavari	19	17	2	3

Source: *Rural Credit Follow-up Survey*, 687-696.
Notes: The 'Legible' result in this survey measures the number of banks with account books without any errors. The 'Erroneous' result measures the number of banks that had errors in their account books. 'Failed Audit' measures the number of banks with audit certificates of 'C' grade and below. Savings were either negligible or non-existent in all banks. The survey anonymised the names and management board of all banks.

Audits failed to restrict embezzlement for two reasons. First, siphoned money was left undetected as managers falsified accounts. Audits of primary banks commonly yielded inaccurate reports.[543] As one official report in 1956 suggested, 'as a result of its inability to employ paid staff, account-keeping leaves much to be desired and naturally demands more of the time of the supervisory and audit staff.'[544] This feature of primary banks persisted throughout the period. Approximately 92 per cent of audited banks in 1934 were reported to have defects in their account books.[545] Similarly, as shown in Table 5.3, 10 out of 19 surveyed primary banks in the Coimbatore district in 1957 were reported to have errors in accounting. Managers recorded defaults as extensions rather than overdue repayments in the balance sheet of primary banks. This lack of accounting transparency was a barrier to efficient regulation.

Second, the provincial government did not supplement audits with effective enforcement. Scholarship on cooperatives in Germany demonstrates that the publication of management dishonesty to various stakeholders ensured that managers did not resort to fraud.[546] Some government officials in 1930s Madras also recognized the importance of this form of social enforcement. One report in 1935 suggested that, 'the maximum of publicity is required. This was Raiffeisen's (in the German context) great maxim.' The report proceeded to comment that, 'Audit reports are not even opened and read for years together, meetings are not held to consider such reports and members are not kept informed of their financial position.'[547] Managers were unafraid

[543] Strickland, "Coöperation and the Rural Problem of India".

[544] *Provincial Banking Enquiry*, 151.

[545] *Annual Report 1934*, 16. Auditors reported that 12,550 out of 13,552 banks had defects in their account books.

[546] Guinnane, "A Friend and Advisor".

[547] *Report on Agricultural Indebtedness*, 63.

of failed audits. According to one report, 'if *panchayats* who know their duties and responsibilities deliberately abuse their position, it cannot be effectively prevented. You may close the society for this reason but the mischief is already done. Therefore, supervision alone may not bring about the reform necessary in societies.'[548] Proposals were considered to increase the frequency of audits. The government attempted to solve the problem by increasing the number of audits to bi-annually. However, this policy change had an insignificant impact when enforcement remained weak. As an official report commented in 1935, 'audit is done only once in six months. In six months much can happen.'[549]

The chapter has so far shown that primary banks reported persistent losses due to low savings and weak regulation. However, the expansion of the cooperative sector in the 1940s and 1950s presents a paradox. A new level of state intervention explains this puzzle.

5.5 State Intervention: Prolonging Banking Failure

The provincial government did not lend to cooperatives and restricted its participation to conducting annual audits in the colonial period. District and municipal government departments saved unspent revenue in district banks. However, the value of government deposits was lower than the savings of members and non-members in the district banks.[550] The post-colonial government adopted a more interventionist stance in the late 1940s. While state officials did identify a problem in the failure of cooperative banks to be both equitable and profitable, the newly formed government believed that capital injections into the cooperative sector was the solution.

The risk of participation in a fragile banking sector motivated the colonial government's passive stance. Loans from government accounted for a negligible share of the working capital of primary banks in the 1930s. The ratio of government loans to the total working capital of primary banks fluctuated between 0.7 and 1.7 per cent between 1928 and 1939.[551] Government loans were not provided to either district banks or the provincial bank in the same period. The Indian central bank, Reserve Bank of India (RBI), in particular, played a limited role in the cooperative movement during the colonial period. Deposits from commercial banks formed the majority of the reserves held by the RBI. Rather than lend the savings of large commercial banks to risky rural cooperatives,

[548] *Madras Journal of Co-operation 1936*, 511.

[549] *Report on Agricultural Indebtedness*, 60.

[550] *Report of the Committee 1928*, 18-22.

[551] *Annual Report 1928-1939*.

the RBI adopted a non-interventionist approach to the cooperative movement. Justifying this non-interventionist stance in the Bombay Co-operative Quarterly in 1938, the RBI stated that,

> The sum and substance of the lengthy memorandum is that while the Reserve Bank is willing to offer advice and even to direct and control co-operative finance it is not willing at present, for various reasons, to deal with provincial co-operative banks – in the case of some because they are not creditworthy, in the case of others because they have established their credit and possess resources themselves.[552]

The end of colonial rule marked a turning point in the role of the RBI in the cooperative movement. The government's First (1951) and Second (1956) Five Year Plans focused on increasing intervention in rural credit through greater participation in cooperatives. The government attributed the limited success of cooperatives to displace informal sources of credit before 1947 to liquidity constraints in primary banks. Accordingly, the First Five Year Plan proposed large capital injections into the cooperative machinery to drive out moneylenders from rural credit markets. This increase in state participation did not translate to a direct interaction with primary banks.

The RBI extended large volumes of credit to district banks from the late 1940s. The first disbursement of loans to district banks was in 1947. Between 1947 and 1951, the value of state financing to district banks increased by over five times.[553] The capital injection into district banks did translate into an increase in the loans provided by primary banks. Indeed, there was a significant rise in membership and working capital in primary banks from the late 1940s.[554]

Government officials perceived the growth in membership and lending as a success. It was a sign that cooperatives were able to capture a greater share of the credit market from village moneylenders. Accordingly, government reports in the early 1950s sustained the position that undercapitalisation was a primary driver of cooperatives' failure in the pre-1947 period.[555] The desire for increased capitalisation led to a further enhancement in state financing to district banks in the late 1950s. The government established various initiatives, involving the allocation of public funds to rural cooperatives to achieve two aims. First, as mentioned, to enhance the capitalisation of rural cooperatives in general.[556] State governments significantly increased their subscription of

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552 *History of the Reserve Bank of India*, (Bombay, 1970), 207.

553 *History of the Reserve Bank of India*, 782.

554 *Report of the Committee 1956,* 425-428.

555 *Report of the Committee 1956*, 8-10.

556 The National Agricultural Credit Fund, managed by the RBI, provided loans to state governments. The governments used the loans to invest in district bank shares.

share capital in district banks during this period. Second, the government allotted public funds to some cooperatives in crisis years, particularly the banks incurring losses because borrowers were impacted by environmental shocks and crop failure.[557]

However, the level of savings in primary banks did not increase at the same rate as the level of state financing. The rate of growth in central bank loans exceeded the growth rate in savings during the late 1940s. Between 1947 and 1952, the ratio of savings to working capital in primary banks declined from 7 per cent to 4 per cent.[558] In other words, the transition in 1947 did not change the legacy of low savings. The ratio between savings and external borrowings widened as primary banks were less self-funded than they were before receiving financial assistance from the RBI. According to data from the 1940s and 1950s, loans from district banks continued to finance the loans provided by primary banks. Data on the primary banks shows that the ratio of external borrowings accrued to loans issued varied between 90 and 130 per cent between 1947 and 1955.[559]

In short, problems in the cooperative sector in the colonial period were carried forward in the post-colonial period. Governments intervened in cooperatives through financial contributions with limited impact on capital structure and regulation. Low savings perpetuated the lack of bottom-up supervision. Managers of primary banks continued to be held accountable by ineffective top-down regulation. To make matters worse, public revenue was being allocated to a failing banking sector in the post-colonial period. This added moral hazard to the list of problems in cooperative banking in post-colonial South India.

5.6 Conclusion

Policymakers in colonial India identified market failure in rural credit as the driver of persistent rural impoverishment. They believed that cooperative banking would solve the problem by both expanding the supply of credit and restricting the monopoly power of the moneylender. Tested success of Raiffeisen banks in Europe inspired the government to create a structure of self-help banking in India from the early twentieth century. This intervention, however, failed to deliver the desired outcome. Cooperative banks rationed credit for many poor borrowers; despite expansion in size, cooperatives captured a small share of the business; and they were unprofitable throughout. The chapter investigates the reasons behind the persistence of these problems by showing where

[557] The National and State Cooperative Development Funds, also managed by the RBI, extended credit to cooperatives that reported high default rates because of harvest failures.

[558] See Figure 5.3.

[559] *Report of the Committee 1956,* 425-430.

the Indian model departed from the stylized Raiffeisen one in the province where the experiment began.

One part of the explanation consists of showing how low savings reduced the role for self-supervision. The government created a three-tier banking structure including primary banks, district banks and a provincial cooperative bank. In the primary banks, depositor and shareholder members were few while borrower members were many. Richer peasants crowded the top-end of the cooperative hierarchy as depositors while poorer peasants crowded the bottom-end as borrowers. Deposits in district banks had a stronger government guarantee than deposits in primary banks. This design flaw allowed the rich to refuse to cooperate with the poor. There was limited mutual supervision as managers were not held accountable by members.

External regulation could potentially solve the problem. The government established Supervising Unions and a top-down regulatory structure including annual audits and a defined process for the liquidation of insolvent banks. However, embezzlement and insider lending persisted as the interests of the supervisors, auditors and managers conflicted. Although the sources used do not deal with the details of the problem, these suggest that the flaws lay in its design. The laws governing regulation were designed not by the banking regulator but by the provincial government. Enforcement was compromised, especially where bank managers carried social and political influence.

Though dysfunctional, the cooperative structure survived. The state allocated public revenue to cooperative banks. Local government departments deposited unspent revenue in district banks during the 1920s and 1930s. The state expanded its financial participation in the cooperative sector in the 1940s. Large capital injections were made into primary banks from 1946. State intervention altered the capital structure of the cooperative sector. Whereas primary banks were debt dependent to apex banks in the 1930s and 1940s, the 1950s introduced the government as the source of lending in the rural credit market. Financial contributions from the state entrenched the problem of moral hazard into cooperative banking in post-colonial India. The problems of dependence on external funds, regulatory failure, and losses, therefore, persisted.

The study offers larger lessons on the challenges of top-down cooperative banking promotion in poor agrarian societies. One lesson is that economic inequality and unequal socio-political influence among rich and poor peasants prevented cooperation in Indian villages. The chapter goes further, analyses institutional and policy regimes, to suggest that thanks to a lack of management accountability, a small section of the rural population benefited from loss-making cooperative banks. Cooperative transplants required a regulatory structure that supported efficient

banking.[560] Additional capital injections into a fragile transplant extended rather than solved structural failures. For the governments in colonial and post-colonial India, providing easy access to credit was the central objective. The cooperative organization was a casualty of this policy.

Further research could expand on the impact of banking regulation by the executive, rather than independent regulators, on the performance of cooperatives. In group lending arrangements, the expectation is that local and insider supervision would ensure efficient management. This case study of Madras suggests that internal supervision was not a sufficient condition, especially when savings rates were low. External regulation was needed. Cooperative banks in India continued to report losses after 1960, suggesting that the lessons drawn from early-twentieth century Madras are indeed robust.

[560] This supplements prior research on the role of external auditing unions in Germany and monitoring by religious establishments in Netherlands in explaining the success of cooperatives in these regions.

Chapter 6. Conclusion

This dissertation studies rural credit markets in South India during the early to mid-twentieth century. The period was one of weak economic development. Landholding was small and unequal while production processes did not change much during the period. Most rural households relied on old seed varieties and natural fertilizers, with a comparatively small number of cultivators owning carts and ploughs. Growth in output required increases in inputs because of the lack of improvements in production processes. Water supply, in particular, played a crucial role in shifting yields each year. Volatile climates predictably led to volatile output and income. In this context, there were several opportunities for private investment. Investments in innovation or land improvement could have yielded high returns. But money was supply-constrained and expensive in rural areas.

Commercial banks did not lend in rural India until the 1960s. Private moneylenders controlled the supply of credit in the colonial and early post-colonial period. The profile of moneylenders in Madras differed from the creditors in other provinces. Urban traders and indigenous bankers were major players in the credit market in Bombay and Punjab. *Marwari* traders, for example, were bankers by profession. They ran large and diverse lending portfolios, which included lending to cultivators in the countryside. In contrast, the urban trading communities in Madras did not lend to cultivators in the province. In the absence of credit businesses in the agricultural sector, money was circulated among the cultivators in Madras. Cultivators with disposable income provided credit to other cultivators. This feature placed constraints on the money market in Madras but provided creditors flexibility in enforcing repayments.

Rural credit markets were fragmented within the province. Creditors were lending to borrowers in the same village. Creditors with disposable income in one village rarely provided loans to borrowers without disposable income in another village. Indeed, there is little evidence of money trading between rural districts. As a result, credit supply in the villages was directly linked to the profitability of cultivation. When cultivation was profitable, savings increased and more cultivators could disburse loans. When cultivation was unprofitable, savings decreased, as did the number of cultivators with the ability to provide credit. Short-term fluctuations in agricultural outputs and income made this structure particularly problematic.

The volume of credit supplied was correlated with the value and volume of crop output. The majority of land in rural Madras was unirrigated. The government constructed large irrigation

projects along already naturally irrigated river deltas. Infrastructure to support groundwater extraction was limited in the hinterland. The entire province was vulnerable to fluctuations in rainfall. Low rainfall caused droughts and famines in the hinterland. The wet districts were better-off but not entirely shielded from climate fluctuations as high rainfall caused waterlogging near the deltas. Crop output was impacted in the hinterland and the deltas, affecting the profitability of cultivation in the province. Fluctuating commodity prices were an added constraint. The prices of cotton, groundnut and rice approximately halved between 1929 and 1934, leading to unprofitable cultivation and illiquid money markets. However, outside the Depression, prices remained comparatively stable during the period in question. Recovery began from 1934 and commodity prices saw large increases in the 1940s. During this period, environmental factors and crop failure had a more significant impact on household revenue than prices.

This study of credit in Madras points to complications when the suppliers and consumers of credit belonged to the same industry. When cultivation revenue fell, credit supply decreased and default rates increased. In bad years, creditors faced a dual problem as the revenue from their primary business fell and borrowers defaulted on loans which also diminished their secondary income stream. Indeed, as crop failure was common, default rates were high in rural credit markets. This had two implications for rural credit markets. First, markets were regularly illiquid. Creditors commonly provided small and seasonal working capital loans. Credit supply was not large enough to expand private investment in capital and land improvement. Second, poor peasants were most impacted by these credit constraints. Working capital requirements were high as poor households had low savings. Poor peasants, especially in the dry districts, either could not access credit or borrowed money at high prices. Creditors in the dry districts mitigated risk by selectively lending to the richer borrowers. Where they could borrow, poor households were regularly over-leveraged as farming offered low profits.

Despite these constraints, evidence shows that creditors continued lending to over-leveraged households. From government commissioned surveys of rural villages in Madras, the primary purpose of borrowing was the repayment of prior loans. For the creditors, belonging to the same industry and locality as the borrowers offered information and enforcement advantages. Creditors knew the profile of the borrowers they were lending to. The cost of monitoring the borrowers was low. Creditors did not have to travel far to monitor businesses in the same village. As such, borrowers could not strategically default on loans. Defaults were caused by unprofitability, not by borrowers deliberately avoiding the repayment of loans. When borrowers did default, cultivators cum moneylenders had flexible options to enforce repayment. Informally, creditors acquired the borrower's produce at a lower value than the market price. In bad years, evidence suggests that

creditors sometimes acquired the entirety of the borrower's produce to satisfy the principal and interest on loans. Formally, lenders executed financial instruments and enforced these in courts to recover defaulted loans. Courts were an expensive solution to the problem of high default rates. However, in the unregulated market, nineteenth century contract laws gave creditors the flexibility to transmit enforcement costs to the price of credit. In other words, creditors initiated legal proceedings against defaulters and indirectly charged them for the additional enforcement expenses. Cultivators cum moneylenders could choose between informal, formal or both types of enforcement structure depending on which offered the most cost-effective approach.

The accent on enforcement is a particular contribution of this thesis. When borrowers defaulted on loans and informal arbitration did not provide creditors with full repayment, courts were the final destination for lenders to enforce contracts and acquire the borrower's assets. However, moneylenders in rural Madras did not have strong judicial protection. Courts were inefficient as disputes lasted between three and ten times longer than seasonal loan agreements. The costs of approaching courts significantly exceeded the average size of loans. In this context, the costs of enforcing contracts were lower than the costs of enforcing mortgages. As a result, creditors only approached courts when the size of the repayment included the costs of enforcement. When borrowers defaulted, lenders executed contracts that either inflated loan principals or increased interest rates to account for these costs. Creditors adopted a three-tiered loan structure, and charged flexible interest rates, to compensate for weak judicial protection. In the first stage, loans were unsecured. In the second stage, promissory notes were attached to loans and the price of these loans increased. In the third stage, mortgages were attached to loans and the price of these loans increased further.

Credit pricing has a large scholarship in development economics but less so in economic history. As the credit markets in rural India were informal, the data on pricing is mostly indicative rather than analytical. Some government-commissioned surveys provide broad ranges of interest rates in select villages and districts, leaving little possibility to trace changes over time. In this context, scholars revert to traditional market structure theories to analyse credit prices in colonial India. The expectation is that monopolistic structures point to high rates and more competitive structures suggest otherwise. This thesis expands this approach to suggest that institutional rather than market structures were better explanations of credit prices. Markets were not always monopolistic. Disposable income was the only barrier to lending. In good years, lenders were numerous. Institutional factors, on the other hand, explain both levels and ranges of interest rates. From this study on rural Madras, credit was expensive because markets were illiquid and legal

institutions functioned poorly. Loan structures were complex and multi-tiered. Prices fluctuated between the tiers to compensate for the costs of lending.

The provincial government in Madras acted on a belief that credit prices were high because moneylenders were not regulated strongly enough. The government commissioned reports and surveys from the late 1920s that attempted to estimate the size of the rural credit market. The larger the credit market, in the government's view, meant that the 'disease' of indebtedness was more widespread. The Legislative Assembly in Madras enforced laws from the mid-1930s that attempted to reduce the level of expensive borrowing. A series of policies ultimately culminated in the 1938 Madras Agriculturists Relief Act, a law which the government enforced until the mid-1970s. The MARA declared an interest rate ceiling of 6.25 per cent per annum on all rural loans. The judiciary administered the law. When creditors initiated legal proceedings against defaulters, judges voided contracts and imposed the new interest rate ceiling. Post intervention, borrowers repaid loans at half or a quarter of the interest rates they incurred before 1938.

This intervention was broadly a failure. The credit market contracted and did not operate more equitably after the MARA. Lending in accordance with the regulations was unprofitable and, in the short term, the supply of mortgage and unsecured credit declined. The already illiquid money market was more constrained after intervention. Government reports and contemporary studies in the 1940s suggest that the creditors that continued to lend did so in a black market, outside the regulatory scope of the judiciary. Following intervention, creditors could not transmit the high costs of enforcement to the price of credit. Lenders avoided courts and relied on informal enforcement arrangements instead.

This transition has lessons for the role of property rights, courts and rural finance. The government strengthened property rights partially with the introduction of occupancy rights in the early twentieth century and more thoroughly with the abolition of the *zamindari* landlord system in 1948. The subsequent strengthening of property titles had a limited impact when courts remained inefficient. Property rights alone is not enough protection or incentive to encourage expansion in lending. Private creditors required judicial protection from courts to incentivise lending. In the absence of this, creditors relied on informal arbitration methods including acquiring the borrower's crop. Fortunately for the creditors in Madras, this institutional shift coincided with rising commodity prices. Crop sharing arrangements became more lucrative in the 1940s. However, prices themselves did not dictate the shift. In a recent study of rural credit in colonial Punjab, Chaudhary and Swamy find that professional moneylenders captured a smaller share of the credit market following the implementation of laws that restricted land transfers.[561] The authors show

[561] Chaudhary and Swamy, "A Policy of Credit Disruption".

that cultivators became the dominant creditors following intervention. Enforcement, and the convenience of informal arbitration, explains this shift. Agriculturist moneylenders had more enforcement flexibility than indigenous or commercial banks. The thesis offers a cost-analysis framework to study this institutional fluidity in informal credit markets.

The winners were few but the losers were many from credit regulations. The black-market lenders won because they remained unregulated. They could price loans higher than before and captured a larger share of the credit market. The impact of intervention on the government is hard to determine. The government might have won in the short term because they delivered on their promise to enact policies with the sole aim of protecting borrowers. The *1946 Report of the Economist for Enquiry into Rural Indebtedness* praised the MARA for reducing the volume of indebtedness in the province. The government did believe that the policy was a success at the time. Not long after this intervention, key policymakers in the Congress-led provincial government earned influential positions in the federal government of independent India. C Rajagopalachariar and P J Thomas, for example, held powerful positions in the Congress Party and federal government in the late 1940s and early 1950s.

Most importantly, and contrary to the government's expectations, the borrowers lost. the amount of credit available in the market declined. The remaining credit was not accessible at lower interest rates than before. Working capital was more difficult to obtain, especially at a time when prices were increasing and the agrarian economy offered more profitable opportunities. Moneylenders lending in accordance with the law also lost. Moneylending provided cultivators an additional source of income, especially when they were protected by contract laws and could transmit the high costs of lending to the borrowers. The interest rate ceiling barred this practice, constraining lending as an additional income stream for cultivators with disposable income. This outcome highlights a broader contradiction in the government's approach to market failure. The definition between formal and informal credit was not entirely clear in the unregulated market. Creditors were unregulated but contracts and administrative procedures played a role in the market, blurring the boundary between formal and informal. Whereas the success of intervention hinged on the market operating within the scope of formal procedure, it ultimately had the opposite effect. The market operated more informally as lenders opted to avoid administrative procedures altogether. The emergence of the black market demonstrates that regulations themselves were a significant part of the market failure problem.

Perhaps it was the design of the MARA that explains its failure. If artificial price ceilings did not work, did increasing market competition with cooperatives solve problems in rural credit markets? The government launched credit cooperatives in rural Madras from 1904. The

establishment of these cooperatives had more potential for success than the price ceilings. If designed well, cooperatives could solve the liquidity problem by expanding the credit supply and successfully lending to poor peasants at lower interest rates than in the informal market. Members absorbed the risk of lending in cooperatives that were self-funded and well-managed. This allowed cooperatives to lend to poor peasants and remain insured against bad years. Under the right conditions, cooperatives did not need to access courts. If deposits were high, then members enforced other members to repay loans, and imposed punishments on the defaulters. Social capital substituted courts as a method of enforcement.

The intervention to establish cooperatives did not achieve the desired outcome. The thesis demonstrates that the government designed a cooperative model that was poorly regulated and failed to nurture cooperation in villages. The government's main objective was to increase the supply of low-cost credit. It designed two features of the cooperative model to allow for this increase in supply. First, the government established a multi-layered cooperative banking structure to compensate for low savings in villages. Second, the post-colonial Indian government injected public money to the cooperative structure to increase the volume of lending. The thesis shows that credit supply increased but cooperatives failed to capture a sizable share of the market. A small sub-section benefitted from loss-making cooperative banks throughout the early- to mid-twentieth century.

Incurring losses is in itself not a measure of failure. Cooperatives were potentially a profit satisficing rather than profit maximising banking initiative. Indeed, cooperatives could have claimed success if they were incurring losses but lending to the poor and increasing private investment in the countryside. Given the volatile nature of the agrarian economy in South India, it is feasible that cooperatives were loss-making because they were lending to the poor. However, the cooperatives in South India were neither profit satisficing nor profit maximising. The poor did not have access to cooperative credit and repayment rates remained low despite selective lending to the rich.

Weak regulation and the resulting mismanagement of cooperatives explains this outcome. The government designed a regulatory system that resulted in conflicts of interest between auditors, supervisors and managers of cooperative banks. External bodies did not regulate the cooperative sector. Managers supervised themselves while government audited the banks. Laws did not specify a regulatory structure for cooperatives until the mid-1960s, and even then, the law delegated regulation to the executive. In these circumstances, it was common for the economically and politically influential villagers to manage and embezzle from local cooperatives.

The focus on credit expansion, at the expense of strong institutional development, reflects an ideological failure in the design of credit intervention. Governments in late-colonial and post-colonial India prioritised equity over efficiency in their policy approach. Artificially constructing credit markets with expanded supply that were fair to the poor, in the government's view, would reduce inequality and improve living standards. Illiquid and expensive credit markets were a symptom rather than the cause of the problem. The government acted on an assumption that peasants remained poor because of failures in market allocation. However, intervention further restricted investment potential of the rural poor.

The government failed to acknowledge the real problem. The credit market was allocatively efficient before intervention. Monopolistic market structure was not necessarily the problem. However, the market was not productively efficient. Production costs, or the costs of lending, and transaction costs were high. This had a detrimental effect on prices which in turn affected the poor consumers more than the rich. In this context, altering the price of credit was a largely superficial response. The market became less transparent, more allocatively inefficient and similarly productively inefficient. In other words, the government's mis-diagnosis encouraged policy strategies that made the problem worse. Markets operated less efficiently and as inequitably after intervention.

The policy lessons from this thesis demonstrate that cosmetic changes to credit markets will have negligible effects when underlying public institutions are either missing or function poorly. Though the thesis does not argue the details of the solution, it implies that the problem lies in failure of public goods provision. Expansion in irrigation infrastructure, for example, needed public investment. Poverty and constrained credit markets restricted private investment. The colonial government collected a tax in the form of an 'Irrigation Cess' from the mid-nineteenth century. This failed to translate to the size of investments needed to make crop production less unpredictable and more profitable. Similarly, legal institutions functioned unproductively. The design of contract laws was not entirely the problem. Courts themselves needed to function more productively.[562] While the Green Revolution saw rising public investment in irrigation, new seed varieties and artificial fertilizers, courts remained expensive and unproductive well into the latter decades of the twentieth century. The government continued to intervene in the informal credit

[562] Further research could consider the sources of unproductivity in the functioning of civil courts. One problem could be the number and quality of judges. Another could be the design of laws themselves. The duration of civil disputes increased exponentially in the post-colonial period. The number of credit disputes in courts declined in the same period. This presents a puzzle in which the volume of cases was not necessarily causing delays in judgements. This outcome could be explained by arising complications due to the creation of a new constitution or the challenges in hiring enough judges with the establishment of new legal systems after independence.

market, however, restrictions on interest rates, loan waivers and similarly cosmetic interventions were unlikely to have any positive effects while this enforcement problem persisted.

The case study of cooperatives in Madras has further implications on the development of financial markets in poor agrarian economies. One lesson is that poverty was a constraint on the development of rural finance. The poor rely on informal sources of finance because the risk of lending is too high for banks to enter the market. From the 1970s, state and private sector initiatives offered new avenues of lending in rural India. Cooperatives continued to expand their market presence while government-owned banks and microfinance organizations began lending in the countryside. Microfinance organizations, in particular, offered a potential solution to credit expansion in risky markets. Self-help and group banking arrangements, analogous to the credit cooperatives model, had the potential to overcome risk barriers and expand lending to the poor. However, a Reserve Bank of India report in 2013 finds that poor households continued to rely on informal sources of credit in the latter half of the twentieth century. According to the report, 43 per cent of rural households borrowed from 'non-institutional' agencies including private moneylenders, traders, landlords and friends.[563] The problem was worse in districts where cultivation was rain-fed and technological improvements were limited. For example, 73 per cent of rural households in Andhra Pradesh, located in the north-eastern part of the Madras province in colonial times, relied on non-institutional agencies for credit in 2002.[564] The report shows that banking initiatives did not expand credit access for the 'small and marginal farmers' in rural India.[565] Similar to the performance of credit cooperatives in early-twentieth century Madras, the supply of credit increased but organizations continued to exclude the poor from accessing this expansion in the late-twentieth century.

The RBI study goes further to suggest that policy and institutional persistence restricted the impact of rural banking initiatives. Informal moneylenders continued to benefit from enforcement flexibilities. Formal creditors relied on legal procedures which accentuated the risk of lending to poor households. Group lending initiatives avoided formal enforcement but they required the cooperation of rich and poor households. It was unfeasible for poor households to raise enough capital to circulate among themselves. The rich needed to participate in order to generate enough money to expand credit and investment. In this context, policies, such as external banking regulations, were required to ensure that the participation of the rich did not translate to exclusion

563 Narayan Chandra Pradhan, "Persistence of Informal Credit in Rural India: Evidence from 'All-India Debt and Investment Survey' and Beyond", *RBI Working Paper Series* WPS DEPR (2013), 6.

564 Pradhan, "Persistence of Informal Credit in Rural India", 10.

565 Pradhan, "Persistence of Informal Credit in Rural India", 11.

of the poor. Indeed, recent studies by Guérin and Mitra Kumar find that caste and class played a significant role in early twenty-first century rural banking.[566] The authors show that the wealthy managed cooperatives and microfinance organizations. The managers selected borrowers by caste and income class in rural India. These findings suggest that the hypotheses in this thesis are robust and applicable in different temporal settings. Environmental, institutional and policy drivers of problems in rural credit markets are not just significant in historical contexts but also in the rural economies of modern India.

The findings in this thesis are subject to potential limitations. The analysis in this study is vulnerable to bias in the sources. This dissertation uses data and qualitative material from government publications. These reports, in turn, collected this information through field surveys. Government agents and economists collected data by interviewing lenders and borrowers in select villages. This allows borrowers to overstate and lenders to understate areas of concern such as high interest rates or one-sided crop sharing arrangements. The government used the reports to inform policies. In this context, political interest might have conflicted with data integrity. Government officials could have manipulated data to justify conclusions and policy choices. Similarly, government-employed surveyors made qualitative observations but it is difficult to estimate the legitimacy of these claims. As such, the thesis could be analysing unreliable data and supporting key claims with surveys infiltrated by vested interests. As mentioned in the Introduction chapter, contradicting views within government circles leave some room for analysing the merits of these limitations. However, due to the absence of other studies that surveyed informal credit markets, it is impossible to directly validate or authenticate the data contained in the government reports.

Missing data from the war years also restricts the analysis in this thesis. The five-year period between 1941 and 1946 was problematic for government reporting. Judicial reports, including the *Annual Statistics of Civil Courts*, failed to publish yearly case numbers. The *Report of the Economist for Enquiry into Agricultural Indebtedness* in 1946 addressed some of these concerns by listing the number of court cases registered under the MARA. However, we lack a full understanding of the number of civil cases, the number of credit disputes and the processing time of these cases. Similarly, land registration reports failed to comment on the number of mortgages and sales in the same period. This leaves an unfilled gap in the third substantive chapter of the thesis as we do not yet know the

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[566] Isabelle Guérin, Bert D'Espallier, and Govindan Venkatasubramanian. "Debt in Rural South India: Fragmentation, Social Regulation and Discrimination." *The Journal of Development Studies* 49, no. 9 (2013): 1155-171; Sunil Mitra Kumar, "Does Access to Formal Agricultural Credit Depend on Caste?" *World Development* 43, no. C (2013): 315-28.
Isabelle Guérin, and Santosh Kumar. "Market, Freedom and the Illusions of Microcredit. Patronage, Caste, Class and Patriarchy in Rural South India." *The Journal of Development Studies* 53, no. 5 (2017): 741-54.

full extent of the medium-term decline in mortgage lending after the MARA. Contemporary studies written in the 1940s and 1950s, and commenting on the issue, are the only sources to fill this missing gap.

Despite these qualifications, in analysing the existing sources, this dissertation does provide reliable lessons for economic history and comparative development. The findings tackle problems of risk in poor agrarian economies, and the methods adopted to mitigate these risks in the past. In doing so, the individual chapters unite theories pertinent to ecological, institutional and policy discourses to understand why in a period where some parts of the global economy might have flourished, the rural economy in South India did not see the required expansion in capital markets. Apart from contributing to the historiography of a region in an under-researched time, these theories can be further tested against preceding and succeeding periods, as well as positioned in comparative global context, substantiating the importance of this dissertation's findings.

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