

Microfinance: A Skeptical History

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Microfinance is viewed as a major innovation which will decrease cultivators' reliance on moneylenders and expand agricultural production. Two defining characteristics are the elimination of collateral and collective liability for debt repayment. But moneylenders in colonial India operated similarly: credit was based on personal reputation, and the extended family and caste were held responsible for repayment. This paper shows that informal rural credit markets in colonial India were large, competitive and efficient. Indian agricultural productivity stagnated during the colonial period due to a lack of agricultural investment, but this analysis suggests it not due to a lack of credit. Indian cultivators spent large sums on ceremonial expenditures such as weddings and funerals. I estimate that agricultural investment could have increased 76 percent if these expenditures were eliminated. If similar factors remain important in India, which it appears they do, institutionalized microcredit will not have significant long run effects on development.

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Microfinance in Colonial India

The Mogul scholar Moreland (1962) noted that the condition of life in rural north India did not change markedly between the time of the emperor Akbar in 1590 and the time when Moreland himself was a civil servant there in 1900. What little evidence we have suggests that this was probably true of India as a whole (Raychaudhuri and Habib (1982), Section XV). One can only speculate over such a long time horizon given the paucity of reliable data. The evidence is better for the colonial period, and while there is some debate as to whether the overall availability of calories per capita deteriorated or merely stagnated, but there is certainly no strong case to be made for a substantial improvement before independence (Guha, 1992). Further, in many respects, living conditions in Indian villages have changed only very little even since independence. Rural Indians remain very poor (Lal, 1988). Kessinger claimed to paraphrase the official “critique” from the 1890’s to the 1970’s when he wrote that Indian agriculture suffered from: “the density of rural population, the size and fragmentation of holdings, technical backwardness, low levels of capitalization, and dependence on the fickle monsoon.” (Kessinger (1975), p. 303.) In short, Indian agricultural productivity stagnated due to too much population growth and too little investment.

It is no surprise then that the solution administrators have suggested is more rural credit. Given their preferences for limited government, late 19th century British officials pushed for agricultural cooperatives in India modeled on German Raiffeisen's Banks. Given their preferences, post-independence Indian administrators took a more direct approach and mandated that commercial banks expand the number of branches and extent of credit in rural areas. None of these attempts have been fully satisfactory. There is still a debate as to the best way to facilitate investment, and still a question as to why the Indian cultivator does not seem to fully take advantage of the programs which are available.¹

¹ Two of the more important papers on this point are Kochar (1997) and Bell, Srinivasan and Udry (1997). Kochar argues that there is relatively little demand for formal credit, in part because poorer farmers believe correctly that they will not be allowed access, or perhaps they prefer informal credit. Bell, Srinivasan and Udry, on the other

In Bangladesh, the Grameen (Village) Bank is seen as a singularly successful attempt to provide rural credit. It was founded in 1976 and now has a portfolio of over \$3 billion and membership of 2.3 million members. It dispenses an average of \$170 to each member, which is 60% of Bangladesh's per capital GDP. It has spawned imitators in Africa, Asia, Latin America and even the US and Europe (Schreiner (2003)). The Grameen Bank has an unusual structure. The founder, Yunus writes that he was inspired by meeting a 21 year old woman who tried to support herself by making bamboo stools. Daily she borrowed 25 cents from a money lender at rates equivalent to 10 percent per day, and then sold the stools to the moneylender at below market rates. Yunus loaned her the money directly himself, and this was the beginning of his bank. Today, the Grameen Bank still loans to those with no collateral. It has operations throughout Bangladesh. Field representatives go to the village, and form lending groups of 5. The groups will only continue to receive loans if all of the members repay previous loans. Thus the incentive to repay is access to future loans and standing within the village. The Grameen Bank has what is perceived to be an astounding 98% repayment rate. Yunus received the Nobel Prize in 2006 for his awareness of the needs of the poor.

No one would consider giving such an honor to a moneylender. And yet, moneylenders have been indispensable in village India at least as long as records have been kept. The first to make this point to a Western audience was Malcolm Darling in his important book *The Punjab Peasant in Prosperity and Debt*. Darling was a British colonial administrator as well as a scholar. He wrote:

Financing the village, marketing its produce, and supplying its necessities, the moneylender in India frequently stood between the cultivator and death ... Whenever, therefore, we are tempted to revile him, we should remember that by his assistance to agriculture for 2,500 years he has made life possible for millions who must otherwise have perished or never been born. (Darling (1947), p. 168)

Moneylenders, at least in colonial India, followed many of the same practices which have been praised in the Grameen Bank. They loaned without collateral based purely on their personal knowledge of the

hand, believe that formal credit rationing remains a problem, in part because of the type of loans available in the informal market. These different findings yield very different policy responses.

borrower. They lent very small amounts. Colonial moneylender rates were similar to the rates charged by the Grameen Bank today. I will argue that there was a fully understood, if somewhat implicit, system of collective liability.

This collective liability, I will argue, underpinned colonial rural credit markets. Less heralded, but according to Armendáriz and Morduch (2007) equally important, features of microfinance such as weekly repayment and "dynamic incentives" created by repeated and increasing loans were also common features of colonial money lending.² While these features were present, it is unlikely that they were as critical for stability. Very recently, modern microfinance institutions have moved away from the group lending model. Even the Grameen Bank now offers some individual liability loans. A recent survey of a sample of microfinance institutions found that only 16 percent made use of group lending (Hermes and Lensink (2007), p. F1), however, as these 16 percent were the largest institutions, their clients constituted two-thirds of all borrowers. And despite the trend away from it, collective liability appears to have a base support which is unlikely to diminish. Such institutions continue to dominate in South Asia and Sub-Saharan Africa, and also dominate in other geographic areas whenever the intent of the institution is to reach the poorest clients (Cull, et al. (2007)). This strongly suggests that joint liability is crucial for maintaining functional credit systems among the very poor.

²Repeated and increasing loans to clients from moneylenders was and is the norm. Weekly repayment with equal installments was not the norm, but such repayment schemes were hardly a major "innovation" of microlenders, as might be suggested by the discussion of Armendáriz and Morduch (2007) (pp. 129-134). The 1930 Provincial Bank Enquiry Committee of the United Provinces of Agra and Oud described in detail the "qist" business, in which loans were repayed in equal installments, either by the month or day. The authors of the report write, "This kind of investment is prevalent almost all over the provinces [of Agra and Oud] in different forms and is showing a great tendency towards increase . . . as it is found attractive in view of the easy installments in which repayments are made," (United Provinces (1931), pp. 297.) I did not see references to such loans in other parts of India at that time. In the modern period moneylenders commonly offer the "kist" form of credit, involving equal monthly or daily repayments, (DasGupta (1988), p. 603). Microlenders, however, overwhelmingly lend to women. This is a real break from the moneylenders of the colonial period. As will be discussed below, women did operate the equivalent of pawn shops in the colonial period, but only heads of households typically contracted loans. Widows occasionally were heads of households, but not often. Lending to women, however, is unlikely to unleash their entrepreneurial talents as what appears to happen most often is they pass on their loans to their husbands or brothers (Goertz and Gupta). On the other hand, Ligon (2002) has argued that the fact that the loans are "pipelined" through the women raises the bargaining power of married women in the relationship, and that may have beneficial effects for both the women and their children.

The attraction of microfinance to policy makers is that it appears to have the potential to alleviate poverty. Lack of access to capital among the poor is perceived to be a problem not just in India, but in most less developed countries. If group liability and small loans were already being provided by a well functioning indigenous institution in colonial India, why was not colonial India a development success?³ Understanding why will not only will it give us a fuller understanding of colonial Indian development, but it also should shed light on current credit policies in India and elsewhere.

In this paper I will exploit the voluminous records of the 1929-1930 Provincial Bank Enquiry Committees (PBEC) and a remarkable data set on Indian rural expenditures and finance from 1951-52, the All India Rural Credit Survey (AIRCS) to analyze the provision and nature of credit in rural colonial India. I begin by discussing modern critiques of moneylending in India to determine a standard for a well functioning credit market. Then I establish that the colonial credit market seemed to satisfy these criteria. It was large, competitive and reasonably efficient, at least relative to mid-19th century US credit markets. This is a relevant comparison as the US was another very large agricultural economy, but unlike colonial India, is considered to have successfully developed. I also compare the Indian credit market to that of the postbellum US South credit markets. Both economies had large numbers of poor cultivators with limited or no land holding, and both credit markets have been accused of leading to the "debt peonage" of these cultivators. The Indian system, however, was much better at supplying credit to poor cultivators. In the US, even rural shop credit was provided only if there was legally enforceable collateral: land or a crop in the field. This constrained the provision of long term credit for those with limited land ownership. The formal legal system in colonial India was very similar to that in the US. In India, however, even nearly landless cultivators had access to long term loans based only on their personal security. My analysis suggests there was no shortage of credit in colonial India. I then examine the uses of credit in India, and find that what limited investment was the choices borrowers made on how they used available funds.

³ Moneylenders offer another service beyond those offered by most microbanks. They are also flexible with regard to repayment as well as loan purpose. This flexibility is one reason why in India today many borrowers still prefer to deal with professional moneylenders despite a plethora of microlenders and subsidized government loans, (Sinha and Patole (2003)).

I. The role of the moneylender in colonial and modern India

Modern academic critiques of Indian moneylenders usually are based on two theoretical papers by Bhaduri ((1973) and (1977)). In his 1973 article, Bhaduri constructed a model in which sharecropping tenants borrowed from their landlord. It was crucial to Bhaduri's results that the landlord was a monopoly supplier of credit. In the model, as the landlord's income depended on moneylending as well as agricultural production, his moneylending deterred his incentive to make agricultural investment and tended to tie the workers to the land because they could seldom pay off their debt in each period. Thus this type of money lending could be culpable both for the lack of advancement of Indian agriculture as well as the prevalence of bonded labor in some parts of India.

Bhaduri's 1973 model has been subjected to theoretical and empirical criticism (Bell (1993)), but its accuracy is somewhat of a moot point for the colonial period. Though landlords are now an important source of loans, according to the AIRCS, in 1951, landlords supplied 2.5 percent of the loans to the first 5 deciles of cultivator families, and 2.9 percent of the loans to the last 5 deciles of cultivator families.

Bhaduri (1977) builds a model in which the moneylender, again a monopoly supplier of credit, has an incentive to undervalue the collateral given implicitly for the loan, such as the crop in the field, land, or promised future labor services. It is necessary in this model that the moneylender have extralegal, "personal" power over the borrower because these collaterals are provided implicitly- this feature of the model was perhaps inspired by the fact that at the time of Bhaduri's paper, each of these assets were protected from forfeiture by Indian law. The moneylender uses his monopoly position to set the interest rate at 'usurious' levels because he would actually prefer the borrower to default as the size of the loan is less than the value of the collateral. This model predicts small landowners will gradually lose their land to the moneylender and become bonded labor.

This second model is potentially applicable to colonial India as the agricultural sector was dominated by small cultivators, either landowners or tenants. The Indian Censuses of 1901 to 1951 indicate that agricultural labor was a relatively steady share of about 1/3 of the agricultural workforce.

About half were landowners and the rest tenants (Krishnamurty (1982)).⁴ In the 75 districts sampled by the All India Rural Credit Survey conducted in 1950 (out of India's approximately 300 districts), the average share of landowners among the cultivator families in the sampled districts is 77.8. The median district had 88.8 percent landowning families. Only 14 of the 75 districts had less than 50 percent landowning families. The category "landowner" in India, however, is a bit misleading. Many landowning families as defined in the AIRCS probably did not support themselves primarily from their own holdings, which was the requirement for being categorized as a "landowner" for the Indian Census. The landowning families in the AIRCS may have leased additional land, or even leased out their own land while they themselves primarily earned their income as laborers. Many seem to have survived with a combination of working their own property and agricultural labor. Only an average of 4 percent of the cultivator families in the sampled districts had no gross income from their own farm. Only 8 districts of the 75 sampled had a 10 percent or greater share of cultivator families with zero gross income from their own farm. Only 3 had a share of 20 percent or more of such families. The highest share of cultivator families with no income from their own farm was 32 percent in Mohindergarh, in northwest India. Many more cultivator families had a very small income from their farm, Rs. 200 or less in 1950, which is only slightly more than Heston's (1982) estimate of GDP per capita in 1945. The average share of cultivator families in each district with gross product of their farm of less than Rs. 200 was 29.2 percent, the median was 26.5 percent. But in only 7 districts of the 75 was the share at 50 percent or greater.

Moneylenders first came to the forefront of the attention of colonial administrators in just such a situation as might have been predicted by Bhaduri's 1979 model. The Deccan Riots erupted in Western India in the 1870s as a response to what were perceived to be widespread losses of land to moneylenders following a prolonged agricultural recession. In rural colonial India, the vast majority of loans were provided on personal security, that is, on the basis of a personal promissory note or bond. This had apparently been the practice in the pre-British period as well. What changed under the British was that

⁴ Kumar (1965) suggests there is little evidence of a dramatic change in the share of agricultural labor relative to cultivators during the entire colonial period (pp. 168ff).

civil courts were introduced to enforce these bonds. If a moneylender brought the case to court, and the lender was found to be liable, his assets could be seized to repay his creditors. The extent to which land was actually lost to moneylenders is a contentious issue among historians of India. Hardiman (1996) claims that land transfers may have been substantial. Charlesworth (1985) writes that most studies suggest that "whatever the illusion of tenurial turmoil, landowning elites and peasant cultivators in most localities came from substantially the same groups in 1947 as in 1850" (p. 5). He cites studies in Uttar Pradesh, Bengal and Madras. Guha (1987a and b) also suggests moneylenders were not anxious to acquire land despite defined property rights and the existence of legal land markets.

There are several potential explanations for limited land transfers. Hardiman suggests that fellow villagers would not buy the land of a neighbor who fell on hard times as this would be socially inappropriate.⁵ In the Punjab Provincial Bank Enquiry Report, the authors suggested that moneylenders were not competent agriculturalists, and did not want to acquire the land.⁶ What appears to have been typical in colonial India was that the borrower might "sell" his land to his creditor, but remain in possession until he paid off his loan. Thus a British administrator wrote in 1899, "The same ryot whose land was apparently sold for ever in 1880 may have full possession of it in 1885 and again borrow for a marriage and go through a mock sale in 1890, and so on," (Charlesworth (1985), p. 178).⁷

Binswanger, et al. (1985) give a more empirically based critique of moneylending in Independent India. These authors supplemented the ICRISTAT panel data set on cultivators from six South Indian villages collected between the 1970s and 1980s with a much more detailed study of the "terms, conditions and partners of credit transactions" for just one year, 1979/80, for these same six villages. They found that in the villages of Mahboobnagar District in Andhra Pradesh (Aurepalle and Dokur), large informal moneylenders were still the dominant source of credit. In the other villages large moneylenders had disappeared and been replaced by formal lending institutions and much smaller scale informal

⁵ Similar social norms led to difficulties in enforcing repayment in Irish credit cooperatives at roughly the same period. (Guinnane (1994), p. 56)

⁶ This still appears to be true. In a 1984 study Jodha found that agriculturist moneylenders were much more likely to acquire land through default than were professional moneylenders (Binswanger, et al., (1985)).

moneylending. The authors speculate that this might have been because the state of Maharashtra had in recent years made it impossible to foreclose on farms for payment of debt (Binswanger, et al., (1985) p. 33). The authors report that overall, the large moneylenders in the Mahboobnagar villages were able to supply as much credit as the formal sector supplied in the other villages. The typical interest rate was 18 percent, higher than the formal sector rate, but substantially lower than the 40 percent rate prevalent in the smaller, informal sectors of the other villages. The main critique of large scale moneylenders by Binswanger, et al. was that the market was highly "segmented". Large farmers with good reputations had easy access to credit for whatever use they deemed appropriate. Other borrowers appeared to have been tightly rationed. "The landless only borrow extremely small amounts without a long term labor contract. Small farmers or large farmers with a poor credit history can only borrow in the seasonal loan market and their borrowings are closely tied to their expected crop output," (Binswanger, et al., (1985), p. 64).⁸

A final problem academics have associated with the informal credit market in Independent India is its isolation. Bell (1993) discussed the lack of intermediation between the formal and informal sector and the resultant loss of efficiency in credit markets. Moneylenders have better access to information on individual borrowers, but formal banks have wider access to funds. He suggested that moneylenders be hired as agents for banks. Ghate (2000) makes a similar suggestion.

This discussion suggests that a well functioning credit market would have several characteristics. Perhaps most importantly, there must be easy entry to minimize the possibility of monopoly exploitation of borrowers. Secondly, the size of the overall market must be reasonably large. There should be intermediation between the urban and the village sector to mitigate the inefficiencies associated with an isolated credit market. Modern microfinance systems are not known for the quality of intermediation across localities. The last two points I would list, however, are the supposed hallmarks of the microfinance innovations. The price of credit should not be too high. And credit should be available to even poor Indian cultivators with limited landholding for long term capital needs.

⁷ Binswanger, et al. (1985) report a modern example of this type of a "sale" to an informal lender (p.52).

⁸ The "seasonal loan market" is borrowing for the relatively short period between planting and harvest.

II. *Quality of colonial India's credit markets*

The Indian colonial credit market had formal and informal sectors. The formal sector consisted of the Imperial Bank- effectively the government's bank, exchange banks, and joint-stock banks. These collectively handled the export trade. There are also indications that they handled the less risky parts of Indian business. The informal sector was much larger. Official descriptions of India's informal credit network break the system into three levels: village moneylenders, town moneylenders and, at the apex, private bankers, or as they were more commonly referred to, indigenous bankers. These businessmen were very similar to the private bankers Sylla (1976) notes as being important to development in the antebellum US, and who had been prominent in England.⁹ Indigenous bankers are typically distinguished from moneylenders in that the former accept deposits and the latter do not. However, this was not a hard and fast rule, and could be broken on either side.¹⁰ Rural moneylenders were the very bottom of the rung of colonial India's credit structure.

Rural moneylenders were a diverse group. Jain writes, "so far as money-lending is concerned, any one and every one takes to it. A member of any caste who may have a little money in hand can hardly resist the temptation of lending it out to neighbours," (Jain (1929), 28). This is a common theme in official documents. Consider an early 1860s statement of the Deputy Commissioner of Rae Bereli in the United Provinces, north India. "Almost every man appears to be in debt, and he who saves a rupee puts it out upon interest," (Musgrave (1978), 219). Charlesworth writes that though people assume the moneylenders of the Deccan in southwest India were Marwaris or Gujarati Vantias, this was grossly incorrect as "everyone dabbled in moneylending." (Marwaris and Gujarati Vantias are the two most important caste clusters of indigenous bankers.) He quotes a 1916 settlement report of the Junnar *taluka*, or administrative subdivision, of the Poona District in Western India. "Outside the towns and large

⁹ Wolcott (forthcoming) has a more extensive survey of the literature on indigenous bankers.

¹⁰ Some moneylenders took deposits from their "clients" though on a very small scale. (Jain (1929), 35.) Before the Assam PBEC, an agriculturist money-lender noted that he accepted deposits (*Evidence* 2, 158.) In evidence before

villages the professional money-lenders are very few. Agriculturists and the artisan classes borrow and lend amongst themselves," (Charlesworth (1978), 102). Evidence given at the Madras PBEC, also suggests that moneylenders do not form a special class. "Roughly speaking all those who have spare money- ryots, merchants, retired officials, shopkeepers and vakils- lend it," (Baker (1984), 279). William Crooke in his report on the Etah district in the United Provinces in 1888 listed these income sources for a Muslim Teli [oilmen] family: pressing oilseeds, Rs. 100 per annum; returns from 3 acres, 2 roods of land (an average size Indian farm), Rs. 50, 6 annas; and from moneylending, Rs. 3,500 per annum. (Rs. 1000 per year was the minimum income required to pay income tax, and was considered very wealthy by Indian standards of the time.) A Thakur family- Thakur's are a rich agriculturist caste- held 98 acres. Their income from agriculture was Rs. 1,231 per annum, and that from money-lending was Rs. 750 (Whitcombe (1972), 166-67). Musgrave gives a long list of lenders in the United Provinces.

In the 1920s, telis continued to lend money... Although the 570 cultivators also borrowed from a *zamindar* in a neighboring village, from *banias* [small scale shopkeepers, moneylenders], Brahmins, Thakurs and Chamars [an "untouchable", leatherworking caste]. Elsewhere ... much of the money lending was in the hands of the Brahmin family priests, while in Edalpur, the local shrine was, through its *pandit* [priest], the leading source of credit. In Arrana,..., the school teacher established a very considerable lending business on his government salary, while the subordinate agents of the estate bureaucracies sometimes used their salaries- and sometimes the estates' money- in credit dealings. In Bhensa,..., the difficulties of the professional *mahajans* and *salukars* [large scale moneylenders] in the neighbouring village of Mawana led them to abandon the loaning of money to the Jat cultivators, who were constrained to borrow from the *behwaris* (butchers) (Musgrave (1978), 219).

It was not just the rich who engaged in rural money-lending. Prominent among India's credit sources for the poor were widows, who apparently operated the equivalent of pawn shops. Jain was particularly impressed with the widows' ability to keep track of their many very small loans despite their almost complete illiteracy (Jain (1929), 66-67). Note that this would suggest that illiteracy was not an

the Madras PBEC, it was reported that local money-lenders accepted deposits "as a social obligation," not because they needed them for their business, (Baker (1984), 280).

insurmountable obstacle to financial provision in India. Jain is not the only one to write of women lenders. Ahmed Shah, an inspector for a Cooperative in the Punjab gave evidence before the Punjab PBEC of on the loans of women, here not restricted to widows, in amounts from Rs. 25 to 300, usually on the security of jewelry (Bhattacharya (1994), 199).

We can get an estimate of the aggregate importance of moneylenders in colonial India from the data gathered by the All-India Rural Credit Survey (India Reserve Bank (1956)). This survey was undertaken to “reveal the broad patterns of the working of agricultural credit in the different regions of the country.” As it was undertaken before the massive post-independence attempts to increase rural credit in order to spur agricultural investment, it is indicative of the behaviors of Indian villagers in the absence of significant government intervention; such a regime would describe most of pre-independence Indian history.¹¹ The survey took place between November 1951 and August 1952, and questions were asked relating to the previous 12 months. There were two parts to the survey. Both parts used the same random selection of eight villages in each of 75 randomly chosen Indian districts, or roughly a fourth of India’s then 302 districts total. These districts span India geographically as well as culturally. The first part of the survey, the General Survey, obtained information from all residents of each of the village. Within each district, a minimum of 384 and a maximum of 2188 families were surveyed. The survey gathered information on what rural Indian families spent money on, and how they financed those expenditures. Questions were asked as to the value of land holdings, expenditure on marriage and death ceremonies, debt repayment, clothing, education, litigation, etc., and the sources of finance of these expenditures such as relatives and friends, traders, moneylenders, banks or cooperatives. For the General Survey, the data are reported for each village, and also aggregated for each district. The unit of observation was the commensal family- that is the family which shared one kitchen. This is standard in the analysis of Indian cultivators where the farm was owned and operated by an extended family which almost always included

¹¹ There were government sponsored agricultural cooperatives. Government attempts to spur cooperative agricultural lending in India had begun in the 19th century. Cooperatives furnished only 2% of all rural loans in the AIRCS. This is an upper bound estimate as half the villages chosen in each district were required to have cooperatives, as the Reserve Bank of India was exploring cooperatives’ effectiveness.

multiple generations and frequently included more than one adult sibling. There is no information given about the average size of the family, or how it might have varied across districts. In the discussion that follows all measures relate to the average per commensal family, which may or may not be the nuclear family. District averages are given for the village as a whole, for all cultivators, for all non-cultivators, and for 4 categories of cultivators separated by the size of holding. Holdings differed dramatically across India, from an average of 6.2 worked acres in eastern India, to 10.6 in southern India, and 15 in western India. For each district, therefore, averages were given not categorized by absolute acreage, but rather for the first decile of landowners in the respective village (Big cultivators), the first through third decile of landowners in the respective village (Large cultivators), the fourth through seventh decile of landowners in the respective village (Medium cultivators), and the eighth through tenth decile of landowners in the respective village (Small cultivators).

The second part of the survey was the Intensive Survey where further information was gathered on 15 cultivating families of each village. The data gathered in this survey which is relevant to the problem at hand are the assets of the family in land and animals, explicit questions regarding farm related expenditures such as the cost of seed and of manure, all relating as before to the twelve months preceding the survey, and the extent, source, type and cost of borrowing. The sample of families was chosen by first dividing each village's families into deciles according to their land holdings. From each of the first five deciles, two families were chosen, and from each of the last five, one family was chosen, to give the total of 15 families, unless there were less than 15 cultivating families in total in the village, in which case all cultivating families were surveyed. The data for the Intensive Survey are reported differently than that for the General Survey. Averages are reported for the district as a whole, for the first five deciles and the last five deciles of the district.

A description of the survey techniques and all of the findings of the survey were reported in the All-India Rural Credit Survey: Report of the Committee of Direction, vol. III (1956). This volume contains over 1000 pages of tables. The main discussion of the results is found in the second volume of

the Report, also published in 1956. The first volume of the Report, which was published in 1954, contained suggested reforms to the Indian credit systems based upon summaries of the Survey results.

Table 1. Per Family Cash Borrowing in Rural Villages in India

State	number of districts	total amount borrowed (Rs.)	Amount Borrowed from each source (Rs.):			
			Banks and Co-operative banks	money lenders	Landlords and non-professional money lenders	relatives
Assam	3	93	0.7	15	21	68
Bhopal	1	148	0.0	41	89	29
Bihar	4	141	0.3	138	21	7
Bombay	7	145	40.1	48	51	53
Himachal Pradesh	1	97	5.0	17	37	44
Hyderabad	4	144	2.0	92	81	22
Madhya Bharat	4	204	7.0	193	6	8
Madhya Pradesh	6	117	6.8	107	28	27
Madras	7	286	18.7	98	268	9
Mysore	2	196	3.0	12	175	9
Orissa	3	72	2.0	66	4	5
PEPSU	2	355	1.5	67	311	42
Punjab	3	192	11.7	60	7	112
Rajasthan	6	193	0.0	183	2	29
Saurashtra	1	185	1.0	173	24	27
Travancore-Cochin	1	197	31.0	94	84	61
Tripura	1	148	0.0	23	20	34
Uttar Pradesh	13	170	4.0	109	48	34
Vindhya Pradesh	2	83	1.0	42	48	1
West Bengal	4	87	1.3	66	14	43
India	75	163	6.9	82	67	33
shares			3.6%	45.2%	27.3%	17.5%

Note: These figures are per commensal family. The data include all cultivating families in the sampled villages. The "India" row is a simple unweighted average of the State figures. The "shares" row is the average of the shares of these loan sources in each district. The shares do not sum to 100 as not all sources are listed in the table.

Source: Table 11 of the AIRCS Report, vol. II.

Data from the AIRCS on extent and sources of cash borrowing of Indian cultivators in 1951-52 are in table 1. Heston (1982) estimates that in 1947 Rs., per capita income in India in 1945 is Rs. 166.

Thus per family rural cash borrowing is approximately the same as per capita income. Kolenda reports

that based on data from the 1961 census, the commensal family in India is between 5.4 and 5.0 persons, on average (Kolenda (1987), table 7). Thus on average each family is borrowing a nearly a fifth of its income. Professional moneylenders supplied an average 45.2 percent of all loaned funds in the 75 sample districts, and non-professionals supplied a further 27.3 percent. A professional moneylender was defined for the purpose of the survey as “all those who, though primarily cultivators, loaned considerable sums of money to others, and those, whether cultivators or not, who earn a substantial part of their income from moneylending (AIRCS, III, p. 2). I have included in non-professional money lenders landlords, who supplied 2.8 percent of borrowed funds, and traders, “wholesale and commission agents but not retailers and shopkeepers”, who supplied 4.5 percent, and agriculturist moneylenders, who supplied 20 percent of the borrowed funds of cultivating families, an impressive level of lending for what must have been a small-scale activity.

The anecdotal accounts and these quantitative figures suggest rural credit market had easy entry. That alone would suggest that it was competitive, but there is the question of whether individuals had access to more than one moneylender. The historical accounts from the 1930s Provincial Bank Enquiry Committees suggest that villagers had loans outstanding with more than one private individual, but no systematic data was gathered on this point. This question was not addressed by the AIRCS. Aleem (1993) gathered the most detailed data on this point. He interviewed 14 moneylenders in rural Pakistan as to their business practices during 1980-81. Of his 14, only 4 were prepared to lend to clients who had other lenders. Binswanger, et al. (1985) found that in the villages with traditional large scale moneylending, the moneylenders would supply all of the significant credit for their client, though clients might have small loans with other lenders. The authors report that though it was infrequently done, one could change moneylenders, but only by paying off past debt. Hardiman (1996) reports the same. Ruthven and Kumar (2002) undertook a very detailed study of the credit relations of 68 households in two villages in Koraon Block, Allahabad District (Uttar Pradesh) in 2000 and 2001. They found that households would simultaneously borrow at interest from shopkeepers, wealthy agriculturist lending on a nonprofessional basis and professional moneylenders, as well as significant borrowing from friends and

relatives interest free. In this sample, the loans from professional moneylenders were the most high-priced and were to be avoided, and so it seems doubtful that one would have more than one such loan outstanding at a time. The Ruthven and Kumar description of the borrowing patterns of households seemed to greatly resemble the historical discussions, even to the extent that poor cultivators “save” by lending to others. Overall, the impression is that the moneylending business, either in the colonial or the modern period, was not a pure monopoly even if one had major loans outstanding with just one moneylender at a time.

Comparative size of Colonial India’s credit market

How did available credit to Indian families compare to other rural agricultural economies? To answer that question, I compare the size of colonial India’s overall financial system to that of mid-19th century US. The US was another largely agricultural economy, but unlike India in the early 20th century, mid 19th century US saw an acceleration of growth to modern rates.

The Provincial Bank Enquiry Committee Reports allow me to estimate the size of the formal credit market. The Bombay PBEC Report gives the size of deposits of the Imperial Bank and the Exchange Banks operating in India. The Central Banking Enquiry Committee of 1931 reports the size of the paid up capital and deposits of all of the joint-stock banks registered. Typically, bank liabilities are the best measure of funds available to be lent. But for some banks in India, deposits were less than the paid-up capital.¹² The measure I report below in table 2 as “bank funds” is the sum of either bank deposits, or bank paid up capital, depending on which is larger, for all of the joint-stock banks in these Indian provinces.

The informal segments of the market, indigenous bankers and rural moneylenders, represent a more difficult task. The income tax divisions of the provinces of Bihar and Orissa, the United Provinces, Madras, and Punjab, however, estimated the capital employed in indigenous banking from their great

familiarity with the records of these firms for their respective Provincial Banking Enquiry Committees. These estimates are virtually certain to be underestimates both because it was in the interests of the bankers to hide their dealings from the income tax agents, and because only firms with incomes of more than Rs. 1000 were subject to income tax, and that was a large sum in interwar India. The Report of the Province of Bombay also ventured an estimate of the capital employed in indigenous banking in the province, and that was Rs. 50-75 crore. These estimates are reported in table 2.

While the committees also ventured a guess as to the extent of rural money-lending, I thought a better estimate could be obtained from the AIRCS of 1951, as those records were much more accurate. For this measure, I used the level of borrowing per family reported to have been financed by landlords, non-professional money-lenders, and professional moneylenders. To bring the 1951 values to a level comparable to 1929-30, I assumed first that the "family" consisted of 6 individuals, which gave me a per capita borrowing/lending figure. The figure of 6 came from rounding up the calculations of Pauline Kolenda from the 1961 census. Then I assumed that the level of rural moneylending relative to the nominal value of agricultural production was the same in 1929-30 as in 1951. I also assumed that the growth in agricultural production between 1929-30 and 1951 was identical across the Indian states. I then multiplied the per capita measure, modified for nominal and real growth between 1929-30 and 1951, by the 1931 rural populations in each of the states. These are of course severe assumptions, but not unreasonable. These estimates are reported in table 2.

Note how much more important the informal sector was relative to the formal financial sector in India. Informal rural credit dominates the funds available through joint-stock banks in all provinces but Bombay and Punjab. The capital of indigenous bankers is nearly as large or even larger than that of joint-stock banks in all provinces, and in the province of Bombay the funds of the indigenous bankers dwarf even that of rural moneylenders despite my using the lower bound of the PBEC's estimates of indigenous bank capital in the Bombay province. It is likely that the province of Bengal would also have had a very significant indigenous banker presence as that was the stronghold of the Marwari bankers.

¹² Sylla also found that deposits were less than capital in New England until the 1890s. (Sylla (1975), Table II-14.)

Table 2. Sources of Financial Credit in India, 1929-30

Province	Capital of Indigenous Bankers (Rs.)	Rural credit provided by professional and non-professional money lenders (Rs.)	Estimated Joint-stock Bank Funds (Rs.)
Bihar & Orissa	55,000,000	399,209,617	8,871,028
Bombay	500,000,000	71,840,067	264,103,942
Madras	340,537,065	302,030,120	61,256,576
Punjab	102,426,000	99,707,703	109,913,862
United Provinces	11,500,000	445,627,488	17,166,655

Sources: See text.

Table 3 gives measures of per capita financial credit in India derived from summing up the sources of financial credit in table 2 and dividing by the province's population. The population of Indian provinces is actually somewhat ambiguous. Within each province, there were quasi-independent states. The second measure adds the population of these states to the province populations. The third measure is derived from the all India deposits of the Imperial Bank and the large exchange banks, divided by a measure of British India's total population. I assume that this financial credit was available throughout India on an equal basis. Actually, the large bank funds were concentrated in Bombay and Calcutta, and to a lesser extent Madras and Karachi. However, this was the simplest assumption. I indicate credit relative to Net Product with and without the addition of the large scale bank credits. There are no measures of Net Product by provinces, so I used Heston's measure for India as a whole.

Table 3. Per capita financial credit in India, 1929-30

Province	(Rs.)			Financial credit relative to Net Product	Financial credit relative to Net Product, including large scale bank credit
	per capita credit	per capita credit including "states"	per capita Large scale bank credit		
Bihar & Orissa	22.65	22.47	4.89	0.14	0.17
Bombay	44.11	38.17	4.89	0.27	0.30
Madras	45.91	44.82	4.89	0.28	0.31
Punjab	17.84	16.29	4.89	0.11	0.14
United Provinces	22.05	22.04	4.89	0.13	0.16

These measures suggest an answer to the question of whether or not financial credit was scarce in India relative to the US in the 19th century. Bodenhorn provides measures of the ratio of bank money to real income by state at decade intervals for the antebellum US; he defines bank money as note circulation plus deposits less the notes of other banks (Bodenhorn, table 2.3). Bodenhorn's figures for 1860 vary quite a bit. The high values are 0.30 for Louisiana, and 0.26 for both Massachusetts and New York. Typical values range from 0.05 to 0.15. The Indian measures in table 3 are noisy. There is the possibility of overcounting because the Imperial Bank lent to indigenous bankers, who lent to professional rural moneylenders. I may be double or even triple counting funds. On the other hand, my figures probably greatly underestimate the lending of private bankers. Another problem with the comparison is that Bodenhorn ignores private banking, which existed even in the US. He uses bank money rather than bank assets precisely because private banks created little money, so he would have a clean estimate of incorporated bank funds (Bodenhorn, private correspondence). Again, this problem with the comparison is mitigated because though Sylla (1975) suggests that one should not ignore private bankers in the US, he in no way argues that private bankers dominated the US financial system in the way they dominated the Indian system. The final problem with the comparison is that the US measure excludes informal loans such as store credit. That might suggest that I am inflating the Indian measure. As I will discuss more fully below, however, informal loans in India were used primarily for long-term needs rather than short term consumption smoothing. Indian moneylender loans were quite different from US store credit. Given all of these points, it seems likely that these Indian measures give the correct order of magnitude of available credit. Thus this comparative exercise suggests that Indian states were not far behind the bulk of US states in the mid 19th century.

Intermediation in Colonial India's Informal Credit Markets

The links between the indigenous bankers and professional, and even agricultural moneylenders, brings up another important point- the potential for intermediation in the informal credit market. The

connection running between the Imperial Bank and the indigenous bankers is well summarized in the following quote from a witness before the Madras Provincial Bank Enquiry Committee.

Indigenous bankers can be said to be practically helping agriculture, trade and industry in the district [Tanjavur], say to the extent of 60% ... The indigenous bankers generally start with a very small capital. The Imperial Bank of India and joint-stock companies [banks] help them to a certain extent. They easily influence the public and get deposits which, in some cases, rise to several times the capital. There are instances where private bankers started business with a nominal capital of Rs. 10 or 20 thousands and transacted more than Rs. 15 lakhs [Rs. 1.5 million] within a period of fifteen years. Finally when the accounts were closed they had a surplus of Rs. 1, 2 or even 3 lakhs in some cases (Baker, p. 287).

Funds from indigenous bankers to rural agriculture flowed through several channels. Sometimes the traders who had been loaned money themselves would subsequently loan money to the agriculturalists. Baker writes that the produce of Madras Province was sold to village dealers. Production and credit expanded "as more and more village dealers became known in the urban market and were able to borrow extra funds from the indigenous bankers," (Baker, p. 258). Other times the indigenous bankers would loan money to smaller moneylenders (small relative to the bankers), who loaned to agriculturists. Musgrave relates the story of a rich agriculturist in Chakerji, a village in Etah in the United Provinces. The agriculturist, named Narayan Singh, lent from his own profits. He found this so lucrative that he borrowed Rs. 2,000 in 1885 from a bohra (a Moslem caste) banker in Kasganj, paying interest at 12 percent per year and lending out at 3 Rs. 2 annas percent per month (3.125 percent per month) (Musgrave, p. 218). The evidence of the indigenous bankers before the Bombay PBEC Report suggests that this was common practice even in 1929. The rate at which moneylenders could borrow from the *shroffs* had not changed much from Musgrave's example (Bombay PBEC, *Report 200*, also *Evidence*, 483).

Of course large agriculturists could borrow directly from the bankers. And, all of these bankers and moneylenders might themselves be brokers or traders, or even agriculturists. It was an extremely fluid system with no legal segregation and the traditional occupational segregation among these productive activities was much more fluid than one might have supposed.

The AIRCS sheds some light on this point. The authors surveyed not only rural cultivators but also sources of credit in the sampled districts, including 3,476 moneylenders. Only 1 percent of these reported borrowing from commercial banks, and only 95 of the 3,476 reported borrowing from indigenous bankers. A larger share, 23.3 reported borrowing from other moneylenders. In all, 33 percent reported borrowing from at least one source (AIRCS (1954), table 7, pp. 958-59).¹³

The Cost of Credit in India's Informal Markets

The various Provincial Banking Enquiry Committee Reports give quite a bit of information concerning interest rates.¹⁴ Here I am only concerned with the rates for rural moneylending. The following table extracted from the report of the PBEC for Bombay is illustrative. These rates were similar for most provinces, where rural moneylending rates varied from 18 to 36 percent. There were a few cases where the rates were as low as 9 or 12 percent, such as for lending on the collateral of jewelry, and for wealthier borrowers. Grain was typically borrowed at rates of 50 percent. There were also a very few cases where the rates were as high as a 100 or even 300 percent. But these were rare. The various PBECs indicate that such rates were limited to itinerant moneylenders such as Pathans and Kabulis. Such moneylenders were truly hated by the Indian peasant, not like the majority of moneylenders, who were domiciled in the village or a nearby market town, and were part of the local community.

The AIRCS gives more detailed information for 1951. All but 3 percent of loans had a recorded rate of interest, and only 1.6 percent of the loans for which rates had been recorded had rates of 50 percent or greater. The rates, however, vary across districts and within the district across income levels. The authors identified the districts as either completely Commercialized, Monetized but not necessarily Commercialized, and Subsistence (AIRCS, vol. II, p. 190-91). Wealthier, more commercialized districts had lower rates than monetized or subsistence districts, and within the districts, wealthier cultivators faced lower rates than poorer cultivators. The data are summarized in table 5. The AIRCS does not report the

¹³ Bell (1991) also uses these data to indicate intermediation in the informal sector.

¹⁴ These data were compiled and summarized by the CBEC, 78-84.

the rates charged separately by source of credit. The higher rates in the poorer districts, however, are unlikely to be due to differences in the sources of borrowed funds. The share of formal sector borrowing was never larger than 10 percent, and was actually relatively high, 7.5 percent, in the subsistence regions. The share of professional and agriculturalist moneylending was fairly stable across the districts, averaging just under 60 percent. The rates are very similar to those reported in the 1930 PBEC Reports.

Table 4. Interest rates for rural moneylending in the Bombay Province, 1931

Region	<i>Sowcar's</i> Rates (percent)	Co-operative Societies' Rates (percent)
Maharashtra (irrigated)	12 to 24	10 15/16
Maharashtra (famine)	18 ¾ to 36	12 ½
Karnatak	12 to 24	9 3/8 to 10 15/16
Gujarat	9 to 18	9 3/8 to 10 15/16
Khandesh	12 to 18	9 3/8 to 10 15/16
Sind	12 to 36	10 15/16

Note: *Sowcar* is another word for professional rural moneylender.

Source: Bombay PBEC, *Report*, 67.

Table 5. Weighted Average Rates Reported in the All India Rural Credit Survey, 1951

District Type	Income group	Rs. Per Commensal Family			Average Positive Interest Rate	Modal Interest Rates in these districts and income categories
		Average Family Assets	Average Gross Value of Farm Production	Average Amount Borrowed		
Commercialized	First 5 deciles	9,576	1,415	433	14.6	10-12.5
	Last 5 deciles	2,479	366	149	17.0	10-12.5
Monetized	First 5 deciles	6,293	1,197	282	16.4	10-12.5; 18-25
	Last 5 deciles	2,102	437	168	18.9	18-25
Subsistence	First 5 deciles	4,226	881	163	23.3	18-25
	Last 5 deciles	1,046	254	82	27.0	18-25; 25-35

Source: Table 12.1 of the AIRCS Report, vol. II.

Compare these to the rates of the Grameen Bank. The inflation rate in Bangladesh is about 4 percent. There was no persistent inflation in the interwar period. The standard Grameen loan rate for an

income producing loan is 20 percent, though as the loan must be repaid within the loan period, and the interest charge is on a "declining basis", the Bank reports that the effective rate is only 10 percent. On the other hand, there are fees and forced saving associated with Grameen Bank loans, and that will bid up the real cost of the loan. Shreiner estimates that 30 percent is a more accurate figure (Schreiner (2003), 362). Thus the rates of the Grameen Bank are certainly not significantly below colonial moneylender rates.

We can also compare the historical rates with moneylender rates in later periods. As noted earlier, Binswanger, et al. (1985) suggested that in 1979/89 in Andhra Pradesh, a relatively poor area, rates were 18 percent in the villages with large moneylenders still operating. It is likely, however, that this was the rate given to the larger farms, as they also say that credit was restricted for small farmers and those with poor credit histories. In the villages with only small moneylenders, the average rate was 40 percent. Aleem (1993) found that the average rate among his sample of Pakistani lenders in 1980-81 was 78.7 percent, with a low of 18 percent and a maximum of 200. Murshid (1992) reports that in a survey conducted over 1989-1990 the average rates charged in Bangladesh were about 44 percent on an annualized basis. Gill and Singh (1997) report typical rates of 21 to 24 percent for landowning families and average stipulated rates varying from 36 to 39 percent for landless laborers, all for the Punjab, one of the most commercialized areas in India. The date of the survey was not given in the article, but presumably was shortly before the publication date. The Centre for Development Studies (1988) undertook a study of informal credit in 4 districts in Kerala and Tamil Nadu. They report average rates of interest varied across villages from 30 to 60 percent. Overall, it appears that typical moneylender rates in modern India vary between 30 and 60 percent, with perhaps the majority being less than 50 percent. The best rates for all but the richest agriculturist in the 1930s was 12 percent. In the modern period it appears to be 18 percent. All but the poorest cultivators appear to have been able to borrow at anywhere from 12 to 25 percent in the colonial and immediate post colonial period. Now, typical rates appear to be from 36

to 50 percent. This suggests moneylender rates have increased since the colonial period by, very roughly, 10 to 20 percentage points, with the rates for the poor apparently rising the most.¹⁵

Other rates in India have not increased so greatly. In 1930, table 4 indicates that Cooperative Bank loan Rates were 9-11 percent. In the 1980s, commercial bank deposit rates were 9-11 percent, and loan rates 16.6 percent (Das-Gupta (1989), 18). In 1930 Western Indian shroffs, the most "bank-like" of the indigenous bankers, could obtain long term funds at 6 percent while they lent short term at 8 to 10 percent to good customers (Wolcott, forthcoming). Comparatively, in the 1980s, Western Indian shroffs' cost of long term funds was 12 to 14 percent while their modal loan rate was 18 percent (Das-Gupta (1989), 523 and 558).¹⁶

Rural moneylenders costs of funds, on the other hand, have also risen quite a bit since the colonial period. According to the PBEC, as mentioned above, village moneylenders could borrow from indigenous bankers at about 12 percent. This is no longer the case. Timberg and Aiyar (1984) write, "Urban informal intermediaries try to avoid coming under the restrictive state moneylending acts and thus do not usually lend in amounts of less than Rs. 3,000, nor do they lend to agriculturists, who are normally protected under these acts," (p. 46). Aleem (1993) reports that the average cost of funds to his Pakistani moneylenders was quite high, with the marginal cost of funds varying from 20 to 40 percent. Irfan, et al. report that for their sample of 1018, mostly Pakistani, moneylenders, those borrowing from formal sources paid less than 19 percent for funds, and those borrowing from informal sources paid 28 percent from friends and relatives (or nothing), or 23 percent from other informal sources (p. 14). The Centre for Development Studies found that moneylenders in Kerala and Tamil Nadu, both in South India, usually paid from 10 to 12 percent, but sometimes up to 24 percent interest on deposits, but all borrowed funds

¹⁵ It is not absolutely certain why rates increase with the poverty of the borrower. It is unlikely that it is due to greater risk, as total total default to moneylenders is infrequent, as I discuss in a later section. It may be because moneylenders pricing reflects local monopolies. It is possible, however, that differential prices simply reflect differential costs. The poorer the borrower, typically the lower the loan amount. Though pure default to moneylenders is uncommon, rescheduling payment appears to be frequent. Transactions costs associated with originally contracting and subsequently rescheduling loans would be a fixed cost, and would disproportionately drive up the costs of smaller loans. Armendáriz and Morduch ((2007), p. 121) report that across a range of microlenders, transactions costs increase with the percentage of small loans in the portfolio.

were from friends and relatives (p. 151). This suggests that the biggest change from the colonial period is a substantial fall in intermediation from the urban sector to rural moneylenders.

We can compare the premium charged over cost of funds by various lenders to get an indication of the cost-effectiveness and competitiveness of the markets. The Grameen bank has deposit rates of 8.5 to 12 percent, and loans at rates equivalent to 30 percent. Armendáriz and Morduch ((2007), pp. 240ff) suggest that the Grameen Bank as well as most other microfinance lenders rely on grants and subsidized loans to fund their activities. Thus the reported premium between deposit and loan rates is an underestimate of the true premium. Rural colonial moneylenders could obtain funds at 12 percent, and typically loaned at rates between 18 and 35 percent, with the majority of the loans being at rates between 18 and 25 percent. Those figures would suggest a rough equivalence between the two types of institutions, with the Grameen bank perhaps charging a higher premium. On the other hand, I have less information on fees by moneylenders in the colonial period, though they existed. In Western India, Hardiman (1996) reports there was a "purse opening" charge of a few annas per loan. (An anna is 1/16 of a rupee.) The premium in moneylending in the modern period is also somewhat unclear, but there is certainly no indication that the premium has narrowed. The rough comparability of the premium between the Grameen bank and colonial moneylending is another piece of evidence suggesting the competitive nature of the latter.

Structure of lending and security in India's colonial credit market

Ultimately, however, the real test of a credit system is its ability to provide a wide range of users funds for productive activities. Here, I think it is illustrative to compare India's rural credit markets to those of the postbellum US South. The antebellum South was characterized by large cultivating units, and credit appears to have been widely available (Bodenhorn). In the postbellum US South, however, the agricultural system was based on sharecropping and small farms, and credit markets are typically viewed as poorly functioning. The decline in credit availability is thought to be associated with the change in the

¹⁶ The shroff loans for both periods refer to "hundi" rates, an indigenous bill of exchange.

structure of agriculture. As the colonial Indian agricultural system more closely resembled that of the poorly financially served postbellum South, this comparison brings into sharp relief the factors which identify the Indian colonial system as a relatively well functioning rural credit system.

There is little systematic quantitative information on credit markets in the postbellum South, though there is extensive qualitative discussion. The agents of the newly formed bureaucracies in two Southern states, North Carolina and Georgia, contacted farmers and bankers on a regular basis in the late 19th century to determine the status of credit for small farms. The main complaint of the bureaucrats was that too much money was borrowed for foodstuffs, fertilizers and animal feed. Even in a bad year, the authors of the North Carolina report argued returns could be positive if "grasses and stock were reported as a special feature of farming, and also in instances where crops were diversified, and home supplies raised," (p. 383). The authors continue that though this had been the advice given for some time, "it is not generally pursued. The reason assigned in many instances for not doing so is poverty, and no doubt that has a great deal to do with it. Farmers frequently are under obligations which compel them to raise a money crop- that is to satisfy creditors," (p. 384). Thus the discussion of credit in the North Carolina government documents is largely restricted to whether or not farmers grew their own supplies or purchased them on credit. For example, in the 1887 survey of laborers and tenants, there is a table drawn from "reliable parties" in each county which includes answers to the following questions, among others: whether or not "tenants buy supplies on time"; the cost of credit; and the security necessary for the loan. The answers suggest that tenants did typically buy on time, that interest rates varied from 10 to 70 percent, and that some type of collateral was almost always required. There were 96 North Carolina counties. In seven, no security is listed, though no reason is given. It could be because no security was required, or simply that that question had not been answered. For the remaining 89 counties, the security required was listed as either a "lien" or a crop mortgage. The lien also involved borrowing against a crop in the field. The situation was the same in Georgia, where between 1888 and the early 1890s the Department of Agriculture made similar surveys of knowledgeable farmers of conditions in their counties. A statistic compiled by the bureaucrats was the "amount of farm supplies purchased compared with last

year," the amount given in percentage terms. The bureaucrats encouraged the farmers to produce more of their own supplies. There was no discussion of credit being used for other ends, such as agricultural implements, livestock, or land. All credit in Georgia as in North Carolina was secured with crop liens, most was given by local stores, rather than banks or more formal institutions. The nature of agricultural credit discussed in these sources is virtually identical to the informal credit supplied in the villages of Andra Pradesh discussed by Binswanger, et al. (1985) for small Indian cultivators in 1979/80. It is seasonal credit, closely tied to the presence of crops in the field.

There was another, private survey, conducted by Lewis H. Haney in 1912 of conditions in the cotton growing districts in Texas. This is in some ways the richest survey, although unfortunately the data are lost, and all that remains is the description in Haney (1914). This market was somewhat different than the markets discussed above in that about 95 percent of the Texas counties covered in the survey most credit was supplied by banks. Despite that, only 15 percent of the loans are for agricultural investments in such things as land, livestock, buildings or machinery (p. 48). The modal loan period is only 6 months. So called "long term" loans were only for 9 months (p. 49). A very few of the "more substantial farmers" were able to roll over short term loans to use the funds for investment purposes. Most of the short term loans, 75 to 90 percent, were secured; 90 percent of secured loans had "chattel mortgages", chiefly mules but also crops in the field. Haney does not blame banks for their inability to provide funds for investment. He argues it is an "inherent impediment in the activities of commercial banks as directed to the needs of farm credit," (p. 56). Though he argues "relatively short time loans, largely based on personal security, are the most pressing need in Texas," (p. 63), he does not think this will come about without government assistance. Haney advocated cooperative personal lending associations, but with a strong central machinery set up by the state. The problem in Texas, in Haney's view, was that, in addition to the futility of such institutions supplying any of the needs of the "negro population due to racism," there was also the problem that "fully 10 per cent of the white tenant farmers of Texas are hopeless." It was not just that land security was not available, another problem was that

these farmers were a "shifting and shiftless group," (p. 61). They did not reside long enough in one locality to build up the ties that were required for functioning cooperative credit.

The long term effect of the credit system in the US South on the lives of those who began their careers as landless cultivators is linked to the typical career path of such men, what historians call the "agricultural ladder". In the US postbellum South, young men who had not inherited land typically began their agricultural careers as wage laborers and worked closely under the supervision of the landlord or his agent. As a young man acquired experience, assets and a reputation for trustworthiness, he would advance to "cropper", then share tenant, then cash or fixed amount tenant and finally owner. A cropper meant someone who was given land to farm, but was provided by the landlord with a mule to plough it, as well as implements and supplies. Once the farmer saved the money to buy his own mule or horse, he became a "true tenant", and received a higher portion of the crop. Both croppers and share tenants typically were still subject to close supervision. After some years in the same area, a share tenant might be given a contract involving no supervision, and rent paid in cash, or as a fixed amount (not share) of the crop. Each rung up the ladder involved a substantial increase in income. In 1913, a cropper's annual income would be \$333, a share tenant's \$398, and a cash tenant's \$478 (Ferleger (1993)). Although cropper contracts were common shortly after the Civil War ended, it was not until 1920 that the US Census started to collect systematic data distinguishing croppers from share tenants.¹⁷ According to the 1920 Agricultural Census croppers constituted 17.5 percent of all farmers in the South. Among Blacks, 36.2 percent of farmers were croppers. Croppers and share tenants together constituted nearly half of Southern farmers. Not all farmers advanced up the agricultural ladder. Survey data from the 1930s suggests that roughly 50 percent of those who had started their careers as laborers or share croppers ended their career no higher than share tenants (Alston and Ferrie (2005)).

The limitations of the US postbellum credit system delayed cultivators at several rungs of the ladder. As credit was not available to poor farmers to buy plough animals, they had to save enough funds

¹⁷ A cropper in the census was defined as anyone who answered yes to the question: "Does the person from whom you rent furnish all the work animals?" (Agricultural Census 1920, p. 121).

to move from croppers to share tenants. On this point, Gavin Wright asks, rhetorically, "Would you lend \$100 to an impoverished but highly mobile wage laborer in a declining county? To buy a horse?" (Wright (1987), 111). Then there is the move from share tenant to cash tenant. The accumulating debt of landless Southern farmers to landlords and local stores has been described as debt peonage. Farmers were, it has been argued, immobilized by their debts. But Wright argues that view is exactly backwards. Farmers could and did walk away from their debt. Those who did remain year-after-year paying off debt were not in bondage. They were the successes. Only stable farmers could establish reputations for trustworthiness and responsible stewardship of the owner's land and receive the coveted cash contracts. The credit system failed when it was not available in sufficient amounts to allow a landless farmer to continue to accumulate debt, forcing him to move to another location and forfeit his hard won reputation.

Colonial Indian farmers faced a similar lack of collateral. But credit was still available, and not just for seasonal credit, and not just with good security. Table 5 drawn from the AIRCS indicates that even poor farmers in subsistence regions contracted cash loans which were on average as much as a third of the average gross product of their farms, and the majority of those loans were based only on personal security. The bottom half of cultivators secured between 80.2 and 91 percent of their loans with no physical collateral. As in the postbellum US South, some of these cash loans were probably for sustenance between harvests. Current farm expenses were a significant cause for cash borrowing in all Indian districts. In addition, there were grain loans; most of those would have fallen into that category, though cultivators also might be borrowing grain for seed. Grain loans were less important in 1951 India than cash loans. In only 23 of the 75 sampled districts were grain loans 10 percent or more of the cash loans. And even in those districts, only an average of 38.8 percent of the families reported grain loans, while 44.2 percent reported cash loans. The average ratio of grain to cash loan was 0.68, but that is mostly due Mirzapur, Uttar Pradesh which had a not unusually high average Rs. 43 per cultivator family in grain loans, but an unusually low Rs. 15 per cultivating family in cash loans. The median ratio of grain loans to cash loans for these 23 districts was 0.28 (Table 8.12, AIRCS (1952), vol. 1, pt. 1). Unlike the US South, in no part of India were loans for current expenditure as important as borrowing to fund

agricultural investment. At least according to their own reports, the largest share of loans, between 23 and 30 percent, was used for long term investments.¹⁸

Table 6. Types of Security for Cash Loans Reported in the All India Rural Credit Survey

District Type	Income group	Annual loan amount relative to family assets	Share of loan reported as being used for agricultural investment	Share of loan reported as being used for current farm expenditure	Share of loans secured by:		
					Personal security	Land	Ornanments
Commercialized	First 5 deciles	5.1	24.7	22.9	81.5	11.7	2.1
	Last 5 deciles	7.9	28.7	17.5	82.4	9.2	3.3
Monetized	First 5 deciles	6.7	29.7	6.9	86.3	8.8	1.7
	Last 5 deciles	12.5	23.9	6.0	91.0	6.1	0.9
Subsistence	First 5 deciles	4.8	29.1	8.6	83.8	6.8	5.4
	Last 5 deciles	9.9	25.9	8.6	80.2	7.6	4.1

III. Caste and the Indian credit system

I argue that the caste system of India was in part responsible for these relatively easy credit market conditions. Though caste has many aspects, most economists have focused on just two: the hereditary assignment of some occupations such as priests and manure collectors or sweepers, and the hierarchy which separated, socially and economically, the high castes from the lower castes. However important these may be both for the speed and the morality of Indian economic development, they are not my focus. I want to concentrate on a different aspect of caste. Whatever else it was, caste is an extended, somewhat formalized kinship network. Srinivas argues that despite the scorn heaped upon it, few Indians would want to abandon the caste system as “joint family and caste provide for an individual in our society some of the benefits which a welfare state provides for him in the industrially advanced countries of the

¹⁸ The smallest group reported in the Intensive Survey was the first or last five deciles. The General Survey data was reported also for smaller groups, including “Small Cultivators”, which was the last 3 deciles. I do not know the value of farm income for this group, but the “Small Cultivators” in Subsistence regions borrowed on average Rs. 71.5 per family, and reported that 19.4 percent of this was for agricultural investments.

West,” (Srinivas (1962), 70). But continued membership in the network required meeting certain obligations. If a member failed to meet his obligations, he, *and his family*, would be formally outcasted, and lose all benefits of membership. In India, there were accepted, formal means of adjudicating cases in which members failed in their obligations to the social network. Each caste had its own *panchayat*, or council, over which the headman of the caste officiated. Cases taken up by the caste-panchayat dealt with personal matters which would lower the reputation of the caste, such as irregular unions and family quarrels, with land disputes, and with other disputes between caste members. The *panchayat* had other functions such as planning community festivals, or reforming the sub-caste, or *jati*, customs (Kolenda (1978), 89). The decisions of the *panchayats* are upheld by the group. The punishment meted out for grievous violations of caste rules is to “deprive a casteman of the right to receive water, or the tobacco pipe, from the hands of his fellow castemen and forbids them likewise to receive it from them.” This effectively expels him from the community. He will not receive help in time of difficulty. There will be no one for his children to marry. Kolenda writes that the resulting “social control of members is unusually strong and effective,” (Kolenda (1978), p. 11).

Caste had a role in maintaining credit and credibility in the rural market because members have a collective responsibility for one another. Nehru examined the surveys of 54 rural villages in the Mid-Gangetic Valley which had been conducted for the Provincial Banking Enquiry Committee. He noted that 50 percent of the debt was not secured. “Patently they are unsecured, as there is no tangible security behind them. But in fact as in a business proposition, they are based on the strongest security, the borrowers caste and credit,” (Nehru (1932), 115, emphasis in the original). Nehru asserted that caste supported credit, but he did not describe the mechanism. The All-India Rural Credit Survey gave more specific details. “The social compunction [to repay moneylenders] is connected with considerations such as loss of ‘face’ or local prestige, caste disapproval, possible pressure through the caste *panchayat* and a variety of other social sanctions which, because they happen to be intangible, are not on that account any the less powerful,” (AIRCS, vol 2, p. 171). Binswanger, et al. describe a similar mechanism operating in 1979/80. “In most villages, village elders will assist recovery [by moneylenders] by mediating between

borrowers and lenders in public meetings. The threat to ask for such a meeting is definitely used to speed up recovery," (p. 35). In marked contrast, Binswanger, et al. found no stigma associated with failure to repay government loans (p. 51).

The rigidities of the caste structure relative to less formal social formations elsewhere would imply that, *ceteris paribus*, the Indian moneylending market would be less risky. In modern Indian village credit markets, risk does appear to be minimal. Walker and Ryan were involved in creating the ICRISTAT data, an intensive study of three villages in South India by the International Crop Research Institute for the Semi-Arid Tropics in Hyderabad stretching from 1975 to 1985. Walker and Ryan believed that a "crude, upper bound estimate" of the default rate in the informal market was 5 percent in any given year even though the great majority of loans were unsecured (Walker and Ryan (1990), 204). Their estimate accords with that of Aleem (1993), for the Chambar area in Sind, Pakistan, who also found a default rate of less than 5 percent. Note that these rates are not very different from the 98 percent repayment of the Grameen Bank.

It was not only caste structure which secured loans in India; it was also the relative immobility of rural Indians. The Report for the 1931 Census states that 959 out of 1,000 Indians reside in their district of birth, an out-migration rate from the district of less than 5 percent! (There were roughly 300 districts in British India.) Indian migration rates remain quite low. Munshi and Rosenzweig (2005) report that from a representative sample of rural Indian households 1982 and 1999, which is newly available, they found that in rural areas migration rates of men out of their origin villages are low and actually declining, from 10 percent in 1982 to 6 percent in 1999. This can be compared to the figures of Graves, Sexton and Vedder (1983) of migration in the US South in the mid 19th century. They found out-migration rates out of the state, not out of the village, of between 16 and 23 percent for Alabama, Georgia, Mississippi, and North and South Carolina. Only Louisiana, at 6 percent, had rates as low as the Indian rates. Caste may also have a role to play in this relative immobility. Munshi and Rosenzweig in fact attribute the low levels of migration to the Indian peasants need to maintain caste connections for credit purposes.

And even if the individual moved, in India his family probably would not. Kessinger (1975) showed for at least one village that the core community of an Indian village changes little over very long periods of time. To my knowledge, he is the only one to prove this point, though it is widely accepted on an anecdotal basis. He made an exhaustive analysis of manuscript censuses, revenue records and family genealogies, stretching from 1848 to 1968 for Vilyatpur in the Punjab. Though there were a few land sales every year, typically of very small lots, Kessinger found land ownership changed very little over this period (ignoring the fact that fathers were replaced by their sons), or in the family composition of his village. What this means is that even if one member of the family moved away, the rest of the family could provide guarantee for the loan. This was especially true in India because, at least according to Hardiman for Western India, family members considered themselves collectively responsible for debt (pp. 92-117). The lack of mobility and the extremely solid kinship connections in India would have greatly raised the returns to rural lending in India relative to, for example, the postbellum US South.

IV. The budget constraint of the rural Indian cultivator.

Given that there was a well functioning credit system in rural India, the question becomes what did Indian cultivators use the system to purchase? Table 7 summarizes the average expenditure of an Indian cultivator in 1951. At least one finding of the AIRCS is likely to be very surprising to Western readers. Indian cultivators spent a remarkable portion of their income on festivals, weddings and death ceremonies. I have reported all India figures, and also broken up India into the three production categories used earlier. For all of India, ceremonial expenditures for one year on average constituted 18 percent of annual crop values. Expenditure on gross agricultural capital investment were larger, but the average district expenditure on ceremonies constituted 76 percent of the expenditure on gross agricultural capital investment. It is also interesting that poorer families, though they spent absolutely less on ceremonial expenditures, have a much higher ratio of ceremonial expenditures to gross agricultural investments, 120 percent. For these families, this type of consumption clearly crowded out investment.

Table 7. Ceremonial Expenditure and Gross Capital Agricultural Investment

Area		# of districts	ceremonial expenditure (avg. Rs per family)	Ratio of ceremonial expenditures to the value of crops	gross agricultural capital investment (avg. Rs. per family)	Ratio of ceremonial expenditure to gross agricultural capital investment
All India	all cultivators	75	117	18%	192	76%
	first 5 deciles	75	162	16%	296	69%
	last 5 deciles	75	73	24%	87	120%
Commercial	all	20	99	16%	263	45%
	first	20	148	15%	421	46%
	last	20	49	20%	106	73%
Monetized	all	28	158	22%	205	84%
	first	28	208	19%	305	74%
	last	28	108	29%	106	130%
Subsistence	all	27	89	16%	124	89%
	first	27	125	15%	195	80%
	last	27	52	22%	53	143%

Note: I use information drawn from the Intensive Survey so that these expenditures can be compared to the value of crop production, though the relationship between ceremonial expenditure and gross agricultural capital investment is virtually identical if data from the General Survey is used.

There is no pattern of ceremonial expenditures across the “types” of regions. There is, however, an interesting pattern in the ratio of ceremonial expenditures to gross agricultural capital investments. In commercialized districts there are more investments in agricultural capital. There is no “type” where ceremonial expenditures were not very large, especially relative to expenditures on gross agricultural capital investments. And it is a fairly consistent pattern that poorer cultivators in each “type” spend much more on ceremonies relative to agricultural investments than their richer regional counterparts.

Potential substitution to agricultural investment.

The relatively large sums spent on ceremonies were noted by the AIRCS authors. They wrote that “the occasions [for borrowing] which figure most prominently in all regions are marriages and

similar ceremonies on which disproportionate amounts are usually spent almost as a matter of conventional necessity.” (AIRCS, vol. 2, p. 186.) They were not surprised by this finding. The perception that the Indian cultivator engaged in excessive spending on ceremonies was commonly held long before this survey. The survey authors themselves cite the observations on this point made in the 1921 Indian census. They also noted and bemoaned the lack of agricultural investment in many regions, saying that in parts of India it was “such as to barely allow for any net addition to capital.” (AIRCS, vol. 2, p. 728) But more hopefully, they wrote of the positive capital formation in regions “in which the tempo of economic activity was very high”. But the study authors did not consider the possibility of substituting funds spent on ceremonial expenditure for funds spent on agricultural investment, nor did they seem to believe that more capital formation was in fact exactly what was needed to speed up the tempo of economic activity in the moribund regions.

What would have been the change in investment if ceremonial expenditures could have been eliminated? To give a concrete example of the relative size of these expenditures, in many parts of India, average annual ceremonial expenditure was equivalent to the price of a plow animal. Plow animals are the second most important asset of Indian cultivator households, land being the first. And the average farm holding of plow animals is just 2.5. Purchasing just one plow animal would push an Indian cultivator from the lowest 50th percentile in terms of this asset category to the top 50th percentile. Further, Guha, who made a careful survey of the agricultural technology of the Deccan, argued the fall in bullocks/acre in the Deccan at this period was associated with the observed fall in yield over his period, 1880-1920. (Guha (1985), p. 62 ff) And the Grameen Bank today strongly encourages its members to buy some type of animal, preferably a milch cow, with their first loan (Goetz and Gjupta 1996).

To extend this point, consider the data in tables 8 and 9. Table 8 presents data drawn from the General Survey on the types of agricultural investments cultivators were making. Eliminating ceremonial expenditures could potentially have greatly increased spending in any of these categories. Table 9 presents data drawn from the Intensive Survey on the actual asset holdings of Indian cultivators, and measures the extent to which these assets could be increased in just one year if ceremonial expenditures

were eliminated. The change in potential asset holding is impressive. Given that Indian cultivators were choosing to make these relatively large consumption expenditures, it is not logically consistent to argue that it was their poverty which precluded augmentation of their capital stock.

Table 8. Types of Gross Agricultural Capital Investment

Group	Total agricultural capital Investment (Rs. per family)	Share of total spent on each type of Agricultural Capital Investment.				
		livestock	implements	irrigation	preparing land	land
All Cultivators	189	0.39	0.10	0.16	0.12	0.17
Big cultivators	626	0.30	0.40	1.35	0.94	1.26
Large cultivators	379	0.35	0.11	0.15	0.14	0.19
Medium cultivators	135	0.45	0.09	0.22	0.12	0.17
Small cultivators	64	0.50	0.09	0.27	0.13	0.19

Source: AIRCS Table 6.

Note: Preparing the land includes bunding and land reclamation.

It is interesting to compare this table to the loan usage of Grameen Bank members. In a sample collected in 1995 these were: livestock and milch cow rearing, 31.6 percent; paddy husking and rice trade, 18.5 percent; small business and rural trade 16 percent; crop farming and land mortgage 7.9 percent; rickshaw purchase 8 percent; homestead cultivation 5.5 percent; construction including housebuilding, latrines and tube wells, 5.5 percent; poultry, sericulture and fish culture, 4 percent. These constituted 97 percent of loans. The remaining 3 percent were used for illness and dowries (Goetz and Gjupta 1996).

Table 9. Potential Increase to Actual Average Farm Assets in Just One Year
Assuming Ceremonial Expenditures Were Shifted to Gross Capital Investment

Area		ceremonial expenditure (Rs.)	value of land (Rs.)	potential increase	number of milch animals	potential increase	number of plow animals	potential increase	manure costs (Rs.)	potential increase
India	all cultivators	117	3507	3.35%	1.84	70%	1.97	69%	62	189%
	first 5 percentiles	162	5489	2.95%	2.54	70%	2.71	69%	97	167%
	last 5 percentiles	73	1447	5.02%	1.13	70%	1.21	69%	28	263%
East	all cultivators	92	2667	3.45%	1.50	71%	1.83	73%	24	376%
	first 5 percentiles	130	3800	3.43%	2.09	71%	2.47	72%	36	357%
	last 5 percentiles	54	997	5.40%	0.88	71%	1.18	75%	12	433%
South	all cultivators	83	4257	1.94%	1.69	75%	1.85	75%	107	77%
	first 5 percentiles	125	7130	1.75%	2.44	74%	2.71	75%	173	72%
	last 5 percentiles	41	1615	2.52%	0.94	77%	0.97	76%	41	100%
West	all cultivators	171	3468	4.93%	2.27	66%	2.20	63%	50	343%
	first 5 percentiles	224	5286	4.23%	3.00	67%	2.91	64%	72	309%
	last 5 percentiles	119	1651	7.18%	1.53	66%	1.46	62%	27	434%

Note: The price of milch and plow animals is derived from a regression of the values of a families livestock holding and their number. The values are Rs.149 (35.13) and Rs.135 (40.88), respectively. Standard errors are in the parenthesis.

Table 10.
Estimates of the Demand for Credit in Rural India Drawn from the AIRCS

Group	Number of districts	Constant	Marginal propensity to borrow (in Rs.) with respect to change in:						R ²
			Capital Expenditure on farm	Ceremonial expenditure	Litigation expenditure	Educational expenditure	Medical expenditure	Clothing & bedding expenditure	
All cultivators	75	6.20	0.53* (0.088)	0.62* (0.154)	0.31 (0.415)	-0.65 (0.742)	0.11 (0.815)	-0.10 (0.113)	0.66
Top ten percent	75	-7.60	0.51* (0.077)	0.26 ^a (0.177)	0.04 (0.548)	0.60 (0.539)	-0.37 (0.551)	-0.04 (0.237)	0.52
Top 30 percent	75	-4.92	0.53* (0.080)	0.38* (0.153)	0.17 (0.494)	-0.06 (0.622)	-0.18 (0.711)	0.07 (0.664)	0.55
Middle 40 percent	75	16.47	0.40* (0.100)	0.86* (0.176)	0.49 (0.380)	-2.19 (0.912)	-0.01 (0.627)	0.11 (0.117)	0.68
Bottom 30 percent	75	-2.27	0.70* (0.121)	0.76* (0.117)	-0.51 (0.697)	-0.08 (0.870)	0.26 (0.365)	0.08 (0.093)	0.62

Notes: ^ap-value of 0.13. * indicates statistically significant at the 1 percent level or beyond. Standard errors are in parenthesis.
Sources: Table 6 AIRCS, General Survey.

Extent of borrowing to finance ceremonial expenditures

As noted above, the authors of the AIRCS believed that ceremonial expenditure was a chief reason for borrowing. Pani (1966) used the 1951 AIRCS and a 1956-60 follow-up to measure the “demand relationship” between borrowing during the year and interest rates, capital expenditure in agriculture during the year, “family expenditure on selected items”, and asset values.¹⁹ He finds a much stronger effect for capital expenditure than “family expenditure” for all cultivators, but a tighter connection between borrowing and family expenditures for lower income groups, and a correspondingly weaker relationship between borrowing and capital expenditure as income falls. Pani does not explicitly define family expenditure.

I repeat Pani’s exercise using just the 1951 AIRCS and being more specific about the categories of family expenditure. I did not include either variable Pani found to have no explanatory power: interest rates or asset value. I did include agricultural investment, ceremonial expenditure, litigation expenditure, educational expenditure, medical expenditure, as these were all anecdotally related to borrowing, and also clothing and bedding expenditure as a check because as an expected annual expenditure, there is no reason it should be related to borrowing.²⁰ The results are reported below in Table 10. I found that ceremonial expenditure is a much more closely tied to borrowing in both statistical significance and magnitude of effect than family expenditures in general. The coefficient is even marginally significant for the top decile of cultivators. The coefficient is close to one for the middle 40 and below, suggesting that a large portion of ceremonial expenditure is financed through borrowing. The coefficient for capital investments is of a similar size, suggesting again that ceremonial expenditures and agricultural investment compete directly for financial resources in poorer Indian cultivators' budgets.

¹⁹ Borrowed funds relax the budget constraint so it may seem that this is simply an exercise in bookkeeping: available funds must equal expenditures. It is useful, however, to determine if the uses of borrowed funds reported by the cultivators match their record of actual expenditures.

²⁰ Datta (1914) writes, “The Indian cultivator is, as a rule, thriftless, and extravagant and much addicted to litigation.” Medical and educational expenses were cited as a reason for borrowing- along with ceremonial expenditures and subsistence borrowing- by Sarap (1991).

Are these borrowing patterns typical? One cannot say too much as this is only one year of data. The authors of the AIRCS noted that the year of the study, while not a bad year, had followed several good years. It was the first year in a decade that prices did not rise. They speculated that that was the cause of the extensive borrowing that they observed. (AIRCS, vol. 2, p. 526 ff.) Perhaps in a different year, these expenditures could have been financed without borrowing. But the point remains that the Indian rural credit system was capable of finance on this large a scale when there was demand for it.

Credibility of the All Indian Rural Credit Survey Data

The substitutability within the budget constraint between agricultural capital and ceremonial expenditure seems in many ways to be an obvious point, and the AIRCS is not an unknown source. So it seems surprising that no one has made this argument before. One reason, perhaps, is that there may have been some doubt as to the credibility of the survey results. The Thorners were scathing in their criticism of the survey results. In an article entitled, “The All-India Rural Credit Survey Viewed as a Scientific Enquiry,” they claimed that there was no proof that these numbers had not just been made up.

A rigorous time schedule was set by the Committee of Direction in Bombay for the completion of the various phases of the field work. Inspectors were required to send in fortnightly progress reports to prove that they were keeping up to schedule. In India it is an old story that if “progress” has to be reported, it will be reported. After all, what is progress but ink marks on paper? [emphasis in the original] (Thorner and Thorner (1962), p. ???)

The Thorners cited the haste with which the survey had been done, the impossibility of acquiring accurate financial data from largely illiterate farmers who kept no records, and the sensitivity of the issue of debt and borrowing all as reasons that the survey could not be considered a scientific instrument, and was in fact wildly inaccurate.

There are, however, several modern data sets that show a similar ratio of ceremonial expenditure to income among poor Indian cultivators, including Banerji and Duflo (2007), Ruthven and Kumar (2002)

and Kochar (2000). Rao (2001b) provides a more first-hand description of rural spending patterns. While personally collecting a data set among the potter caste in a village in the southern Indian state of Karnataka in the 1990s, he was struck by the large expenditures he observed on dowries, wedding feasts, and festivals. The members of this caste, who are largely agriculturists, are all quite poor, below India's poverty line. Their day-to-day lives are quite difficult, even grim, according to Rao. But Rao was struck by the lavishness of their celebrations. Dowries, including the exchange of ornaments and clothes, were up to six times annual income. The costs of the wedding feast itself were roughly 20 percent of annual income. And beyond the wedding and death ceremonies, expenditure celebrating annual festivals constituted an additional 15 percent of annual income.

Other evidence, though anecdotal, also supports the existence of large ceremonial expenditures in India. We have many observations in the historical record on this point. Let me cite just one example. Thomas Coats, in reporting his observations on the township of Lony in the Bombay Deccan, observed that a slave's marriage, paid for by the master, would cost on the order of Rs. 50 or 60 (Coats (1823), p. 240). This is remarkably large given that Coats noted elsewhere that "grown up men with families elsewhere were paid 25-30 Rs. per year plus room, board and clothes. The full extent of their costs were 43-48 Rs. per year," (p. 238). Thus a slave's marriage costs were equivalent to a free family's annual income. A more typical marriage, according to Coats, "went on for 2 or 3 days, and cost between 200 and 300 Rs., but could cost much more" (p. 212). He also reported that "all but 15 or 16 of the towns 84 households are in debt to the money lenders. The average principle is between 40 and 200 Rs. These debts were principally incurred for cattle or marriage (p. 227)." Thus Coats observations for the Township of Lony in the earliest part of the 19th century accord well with Rao's finding in the latter part of the 20th century for Karnataka.

Perhaps the data are credible, but I am misinterpreting their meaning. What exactly were these expenditures? Indian weddings and funerals go on for many days. There is feasting both for family members and typically for the entire village as well. There are also large expenditures for special clothing to be worn and to be given as gifts to both the bride's and groom's family. And for weddings there was

the additional expense of a dowry, typically involving clothing, ornaments, cash and gold. I would like to separate out the cash and gold portions of the dowry- which are simply transfers of income- from the pure consumption aspects of these ceremonial expenditures, but the data do not allow me to do so. But I can be certain that the festivities alone constituted a relatively large expenditure for the Indian cultivator. For the General Survey, data were gathered separately on expenditures for “Death Ceremonies” and “Marriage and Other Ceremonies”. Death ceremonies would not typically have a monetary transfer component. The ratio of Death Ceremony Expenditures relative to “Marriage and Other Ceremony” expenditures are 19 percent for the "All Cultivators" category. It seems reasonable to assume that the pure festivities associated with a marriage would be at least as great as the festivities associated with a burial. In this case, we can double the expenditure on death ceremonies to get an estimate of the pure consumption aspects of ceremonial expenditures. For most parts of India, at the most, the pure consumption portion of "ceremonial expenditure" would be about half as large as was estimated before. Such a figure is still quite large as a share of crop value.

IV. Ceremonial expenditures and the informal Indian credit market.

Typical economic models would not have impoverished cultivators with too small, undercapitalized farms borrowing to finance lavish consumption. The historical literature uses less kind words to describe this behavior. The AIRCS was in many ways a follow up to the Provincial Banking Enquiries of 1929-30. Carried on at a provincial level, these enquiries were also an attempt to understand the functioning of India’s rural credit system. The chairman of the United Provinces of Agra and Oud committee was E. A. H. Blunt, who later wrote a seminal text on Indian castes. Consider his exchange with Mr. C. Maya Das, the Principal of the the Agricultural College, Cawnpore.

The Chairman: Unproductive debt has by far the largest share. They say that Government must arrange for cheap credit for the cultivator in order to enable him to pay off his debt, but we find that 50 per cent of it is not agricultural debt at all; it is merely the personal debt for which his habits are responsible. It is in no sense agricultural. You can plausibly argue that Government should in some way provide cheap credit for true

agricultural debt, but you cannot claim that Government should finance marriages, deaths and even ancestral debt. – (Witness) I do not agree there, because you have got to consider the agriculturist from the point of view of an ignorant factor in the national economy, and Government is wholly responsible to look after such a person. You have to look after insane and mentally defective people, and from that point of view Government should to my mind be responsible to see that this poor man, who does not know what he is doing in the majority of cases, does not fall into the hands of the money lending classes. (India. United Provinces PBEC, vol. 3 (1930), p. 348)

It is not clear whether it would be more insulting to be described as extremely improvident or “insane and mentally defective”.

Some analysts have argued that these transfers served an important economic function. In the face of the enormity of the climactic shocks they experience, Indian cultivators rely on transfers from family members and loans. One would think that stronger family connections- built up through family festivities- would increase one’s ability to borrow from kin and caste connections in times of need. It also seems likely that village wide perceptions about the ability to repay debt would strongly affect one’s access to loans. Rao made this point. He speculated that, especially spending on festivals, “serve the function of reinforcing social cohesion in the community.” (Rao (2001a), p. 78) He also pointed out that expenditures could directly lead to immediate tangible rewards such as lower prices on food, higher social status and more invitations to meals from other families.²¹

How important are transfers and loans to modern Indian cultivators? Consider the findings of Jaoby and Skoufias. Their sample was collected in three South Indian villages between 1975 and 1984 by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). According to Jacoby and Skoufias, irrigation is uncommon in these villages, and agricultural profits are closely tied to rainfall. In two of the villages, Aurepalle and Shirapur, “rainfall is erratic and crop failure is frequent.” (Jacoby and Skoufias (1998), p. 7) These villages are thus an almost perfect laboratory to test whether the welfare of the Indian cultivator is in fact a hostage to weather. Jacoby and Skoufias tested for full smoothing of income from period to period. This would require full credit and insurance markets. They could not

reject the hypothesis of full smoothing.²² In part, villagers smoothed income through transfers between kin and caste networks. But Jacoby and Skoufias also found that the debt market had aspects of insurance in at least in two of the three villages. In Aurepalle and Kanzara, not only were transfers greater in the presence of unanticipated negative income shocks (in their model, captured by unusual fourth quarter rainfall affecting the harvesting of the kharif crop), but there was also a change in repayment of debts. Repayments rose for positive anticipated shocks, and fell for negative anticipated shocks (Jacoby and Skoufias, p. 10). Creditors effectively provided income insurance. An important point about the debts in the ICRISTAT sample is that they are largely contracted within the village. Only 13 percent of loans (29.7 percent of loan value) were provided by formal institutions. The bulk of the credit was supplied by money lenders in the village “or through informal arrangements with employers, shopkeepers, etc,” (Rosenzweig (1988), p. 1159). There is thus strong evidence that kin and village connections, and a strong relationship with lenders, matter deeply for the survival of the modern Indian cultivator.

Implications for the future of microfinance..

What does this history suggest concerning the potential of microfinance to alleviate poverty in modern India? First note that the colonial Indian informal rural credit market was reasonably large and competitive, and in fact seemed to function better than the informal market at the end of the 20th century. Second, a chief use of credit in colonial India was large ceremonial expenditures across the income spectrum of Indian cultivators. Given these two points, it seems unlikely that a shortage of rural credit was the chief constraint on accumulations of agricultural capital. The problem was not that Indian cultivators, of all income levels, could not borrow to finance capital accumulations, it was that they preferred to spend the available funds on ceremonies. I am hardly the first to make this claim. My contribution has been the quantitative and comparative analysis of the credit markets.

²¹ Rao did not claim to be original in this point. It is suggested frequently in historical discussions of India.

²² Townsend (1994) was the first to test for full smoothing using the ICRISTAT data, though he tested for annual not seasonal smoothing. He rejected full smoothing. He did find that households within the village were sharing

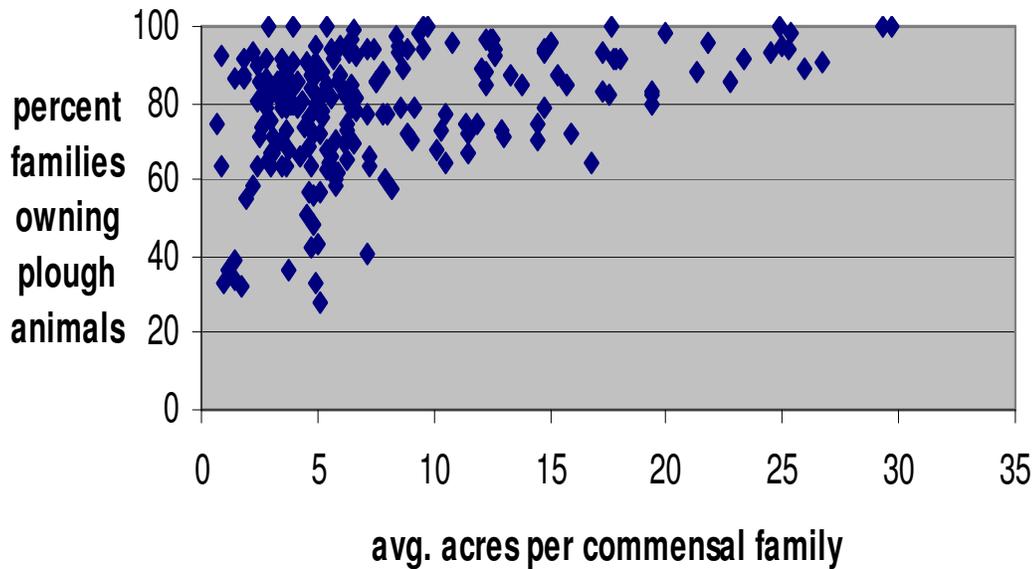
These points suggest microfinance will never have a significant impact on economic growth. Microfinance is still of marginal importance, at least in India. In 2001, though there were between 800 and 1000 non-governmental organizations assisting the poor with their credit and saving needs, Sinha and Patole (2003) estimate that fewer than 3 million Indian families were reached. Suppose, however, that funds from microfinance organizations were available to as many families as were funds from moneylenders in the colonial period. I would argue that still the effects would not be large. Growth requires investment. Financial intermediation is supposed to spur growth because of its potential to spur investment. What if the link between available credit and realized investment is broken? Colonial cultivators were constrained, either by improvidence or fear of seemingly inappropriate behavior, to use excess funds for consumption. When they did not have immediate funds for this purpose, they borrowed. In an economic sense, what is so impressive about the Indian rural credit system was not that it did lead to impoverished, indebted Indian cultivators, but that it could lead to such indebtedness. Large loans were offered to poor cultivators on almost no guarantee beyond their personal word. As modern surveys suggest that the spending patterns of Indian cultivators have not changed substantially since the colonial period, it is unlikely that simply restoring available credit to the levels seen in the colonial period would substantially affect agricultural investment and growth.

I want to make one final point regarding investment. I have claimed that the Indian colonial credit system was superior to that of the postbellum US South because it allowed for long term borrowing even by landless, or near landless cultivators. I believe there is strong evidence for this. I also claim that the availability of credit would have mitigated the capital constraints of colonial Indian farmers with regard to farm fragmentation and the shortage of livestock, but it did not in part because of spending on ceremonies. While I believe this is correct, it is worth pointing out that another part of the problem was the severity of the capital constraints. Figure 1 depicts the relationship between the average size of cultivated holdings per commensal family and the proportion of families with at least one plough animal

income in the sense that household consumption depended more upon village income than household income. He, however, found aggregate village shocks were only partially smoothed across time.

in each of the eight villages covered by the 1951 AIRCS survey in 27 "Subsistence" districts. Most commensal family farms were quite small, and many families did not own a plough animal. It should not be thought that the villages with larger farms and a higher proportion of plough animal ownership were financially better off than the others. None of the villages depicted in figure 1 were well off. Data on the value of the gross product of farms are only available from the Intensive Study, and thus only at the district level. The correlation between gross value of farm output and average acres sown for the bottom fifty percent of cultivators across the 76 districts surveyed is only 0.11. It is likely that the larger farms had less fertile land and required more acres just to maintain the family at subsistence levels. Larger farms meant that they needed to own their own plough animal as it was impossible to share or rent animals for these larger farms. One might argue that what my discussion has really shown is that improving the lives of these cultivators would require a substantial increase in the resources available beyond what was available in the colonial period. An additional plough animal or a slightly larger farm would have improved the family's welfare, but it would not have eliminated risk. Under these circumstances, it seems reasonable to argue as Charlesworth has that, "the certain return in social prestige from a lavish wedding made that, often, a more attractive and "rational" investment than sinking funds in agricultural innovation where output levels and market demand were subject to such vacillation," (Charlesworth (1985), 81).

Figure 1. Percent of Cultivating Families with Plough Animals vs. Avg. Acres Cultivated per Family in the villages of the 27 "Subsistence" Districts of India, AIRCS 1951



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