Microfinance in Colonial India

Susan Wolcott

Microfinance is viewed as a significant step in solving the credit problems of developing countries. It was implemented to lessen poor cultivators' reliance on moneylenders. Two of the defining characteristics are the elimination of collateral and collective liability for debt repayment. But moneylenders in colonial India operated in a similar manner: credit was based on personal reputation, and the extended family and caste were held responsible for repayment. This paper shows that the rural credit market in colonial India was large, competitive and reasonably efficient. Evidence suggests that Indian agricultural productivity stagnated during the British colonial period due to a lack of agricultural investment, but I would argue 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 been increased 76 percent if these expenditures had been eliminated. I explore the cultural reasons for these expenditures. If similar factors remain important in India, which it appears they do, the simple expansion of credit will not have significant long run effects on development.

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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 (CEHI, vol. I, Section XV). While 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 conditions deteriorated or merely stagnated, at least in terms of the overall availability of calories per capita, there is certainly no strong case to be made for a substantial improvement before independence. (Guha, 19??) Further, in many respects, living conditions in Indian villages have changed only very little even since independence. Rural Indians remain very poor. (Lal, 1988) Why? One does not have to search long for the prevailing view as to why there was no progress. I will borrow Tom Kessinger's paraphrase of the official "critique" from the 1890's to the 1970's. 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, p. 303.) In short, Indian agricultural productivity stagnated due to a lack of investment: farms were too small and worked with too little fertilizers, too little irrigation, and too few livestock.

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 the German Raiffeisenbanks. Post-independence Indian administrators preferred a direct managerial approach and required that 5 percent of a bank's liabilities …. 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]

In Bangladesh, the Grameen (Village) Bank is seen as a singularly successful attempt to provide rural credit. It was founded in 1976 and has disbursed a cumulative total of $638 billion, disbursed $730 million between August 2006 and July 2007, and has 7.24 and million.[2] It disperses an average of $200 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.[3] The Grameen Bank has a very usual 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. To buy the materials she borrowed 25 cents form a money lender at rates equivalent to 10% 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 in X villages 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. They are, after all, the villains in the story repeated above. 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*. It is interesting that Darling was a British colonial administrator as well as a scholar. He wrote:

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[1] Two of the more important papers on this point are Kochar (1997) and Bell, Srinivasa 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 hand, believe that formal credit rationing remains a problem, in part because of the type of loans availably in the informal market. These different findings yield very different policy responses.

[2] www.grameen-info.org/bank/GBGlance.htm.

[3] Schreiner, Mark. 2003. "A Cost-Effecitiveness Analysis of the Grameen Bank of Bangladesh." Development Policy Review 21(3): 357-382.

> Financing the village, marketing its produce, and supplying its necessisites, 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 borrower. They lent very small amounts. They were, most historical descriptions agree, reasonably flexible with regard to repayment. 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. In short, there was microfinance in colonial India. And yet, colonial India was hardly a rural development success story. It is an important to understand why. Not only will it give us a more complete view of colonial Indian development, but it also should shed light on the efficacy of credit policies in modern India.

This paper examines the provision and nature of credit in rural colonial India. 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 1950-51, the All India Rural Credit Survey (AIRCS). I first establish that the colonial credit market 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, and it is considered to have begun to successfully develop in the mid 19th century. I then discuss the uses Indian peasants had for rural credit. I find that even very poor Indian cultivators spent relatively large sums on ceremonial expenditures, that is, celebrating festivals and weddings, and mourning deaths. On average, these expenditures are on the order of 20 percent of annual crop income, and 76 percent of annual gross investment in agricultural capital. For poorer farmers, ceremonial expenditure was over 100 percent of gross investment in agricultural capital. Consider an alternative cultural pattern in which Indian villagers shifted a significant fraction of their actual expenditure on ceremonies to agricultural investment. This theoretical transfer would have almost

doubled capital accumulation and so would necessarily have spurred economic growth.[4] Why did Indians engage in such apparently wasteful practices? Tirtankar Roy (2002, p. 128) argued in respect to Indian economic history's contribution to understanding modern India that "In a labor surplus economy facing persistent high risks, conditions of manual labor and behavior toward risks must be the principal links between the past and the present." Many historians believe these expenditures strengthened social network ties. Anthropologists, historians and increasingly development economists, believe these networks are a chief means by which agriculturalists in a pre-industrial society maintain consumption levels in the presence of idiosyncratic risks large enough to push income below subsistence with reasonably high probability. If that is true, and such factors remain important today, increasing the availability of credit will not have long run positive growth effects. The problem is not availability of credit, but the use of credit. This argument would suggest that the long run effects of microfinance may lie in the way in which it alters social norms as much as the way in which it alters credit markets.

I. Credit markets of colonial India

The credit markets of colonial India were divided into 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. 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" Richard Sylla notes as being important to development in the antebellum US, and who had been prominent in England.[5] Indigenous bankers are typically distinguished from moneylenders in that the former accept deposits and the latter do not. However, this is not a hard and fast rule, and can be

[4] It may seem a rather wild counterfactual to change cultural patterns, but it is not without precedent. Michele Tertilt (2006) has recently posed a similar counter-factual- eliminating polygamy in Africa- and considered the subsequent effect on saving and growth.

broken on either side.[6] This paper will primarily be concerned with rural moneylenders, the very bottom of the rung of colonial India's credit structure.

Rural moneylenders were an extremely 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."[7] This is a common theme in official documents. Peter J. Musgrave quoted an early1860s statement of the Deputy Commissioner of Rae Bereli, which is in the United Provinces, north India, on this point. "Almost every man appears to be in debt, and he who saves a rupee puts it out upon interest."[8] Neil Charlesworth writes that though people assume the moneylenders of the Deccan in southwest India were Marwaris or Gujarati Vanias, this was grossly incorrect as "everyone dabbled in moneylending." 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 villages the professional money-lenders are very few. Agriculturists and the artisan classes borrow and lend amongst themselves."[9] C. J. Baker, quoting evidence given at the Madras PBEC, also noted 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."[10] Elizabeth Whitcombe in her study of the rural economy of the United Provinces quotes William Crooke from his report on the Etah district in 1888 who 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

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[5] Sylla, Richard, "Forgotten Men of Money: Private Bankers in Early U.S. History, " *Journal of Economic History*, vol. 36, no. 1 (March 1976), pp. 173-188.

[6] Jain notes that some moneylenders took deposits from their "clients" though this was on a very small scale. (Jain, L.C. 1929. *Indigenous Banking in India*. Macmillan and Co., 35.) Before the Assam PBEC, an agriculturist money-lender noted that he accepted deposits. (India. 1930. Banking Enquiry Committee (Assam). Report, 1929-30, *Evidence* 2, 158.) Baker notes that in evidence before 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, Christopher John. 1984. *An Indian Rural Economy 1880-1955. The Tamilnad Country side.* Clarendon Press, 280.)

[7] Jain, *Indigenous Banking*, 28.

[8] Musgrave, Peter J. 1978. "Rural Credit and Rural Society in the United Provinces, 1860-1920." In *The Imperial Impact*, edited by Clive Dewey and A.G. Hopkins. University of London, the Athlone Press, 219.

[9] Charlesworth, Neil. 1978. "Rich Peasants and Poor Peasants in Late Nineteenth-Century Maharashtra." In *The Imperial Impact*, edited by Clive Dewey and A.G. Hopkins. University of London, the Athlone Press, 102.

[10] Baker, *Indian Rural Economy*, 279.

moneylending, Rs. 3,500 per annum. (Rs. 1000 per year is the minimum income required to pay income tax, and is considered very wealthy by Indian standards of the time.) She also tells of a Thakur family, a rich agriculturist caste, who held 98 acres. Their income from agriculture was Rs. 1,231 per annum, while that from money-lending was also quite substantial, Rs. 750.[11] 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*, 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*, 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* 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).[12]

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.[13] Note that this would suggest that illiteracy was not an insurmountable obstacle to financial interactions in India. Jain is not the only one to write of women lenders. Neeladri Bhattacharya cites the evidence before the Punjab PBEC of Ahmed Shah, an inspector for a Cooperative in the Punjab on the loans of women, here not restricted to widows, in amounts from Rs. 25 to 300, usually on the security of jewelry.[14]

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[11] Whitcombe, Elizabeth. 1972. *Agrarian Conditions in Northern India*, vol. 1. University of California Press, 166-67.
[12] Musgrave, *Rural Credit*, 219.
[13] Jain, *Indigenous Banking*, 66-67.
[14] Bhatacharya, Neeladri. 1994. "Lenders and Debtors: Punjab Countryside, 1880-1940." In *Credit, Markets, and the Agrarian Economy of Colonial India*, edited by Sugata Bose. Oxford University Press, 199.

We can get an estimate of the importance of non-professional moneylenders from the data gathered by the All-India Rural Credit Survey. 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.[15] I will describe the AIRCS in detail in a later section. Here I will only note that the survey took place between November 1951 and August 1952, and questions were asked relating to the previous 12 months. The data are reported for each village, and also aggregated for each district. The observational unit is the commensal family, 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 multiple generations and frequently included more than one adult sibling.

[15] India. Reserve Bank. 1956. *All-India Rural Credit Survey: Report of the Committee of Direction*, vol. I-III. There were government sponsored agricultural cooperatives. Government attempts to spur cooperative agricultural lending in India had begun in the 19th century. But at the time of the 1951 survey, cooperatives furnished only 2% of all rural loans. Further, there were no requirements on private banks to supply credit to agriculture, as there are today. This latter requirement has meant that private moneylenders no longer supply the bulk of rural loans.

Table 1. Per Family Borrowing in Rural Villages in India

State	number of districts	total amount borrowed (Rs.)	Amount Borrowed from each source (Rs.): landlords and non-professional money lenders	money lenders	Banks and Co-operative banks	relatives
Assam	3	98	18	11	0	60
Bhopal	1	118	70	29	0	17
Bihar & Orissa	4	137	18	108	0	6
Bombay	7	147	21	33	26	38
Himachal Pradesh	1	98	24	15	4	40
Hyderabad	4	148	42	67	2	16
Madhya Bharat	4	186	6	151	6	5
Madhya Pradesh	6	138	16	74	5	18
Madras	7	294	158	66	12	8
Mysore	2	174	137	12	3	9
Orissa	3	56	3	47	1	4
Pepsu	2	373	278	51	2	33
Punjab	3	150	10	43	6	72
Rajasthan	6	193	1	158	0	25
Saurashtra	1	207	0	144	1	22
Travancore-Cochin	1	219	3	72	22	46
Tripura	1	106	12	18	0	26
Uttar Pradesh	13	208	35	94	3	27
Vindhya Pradesh	2	71	38	30	1	1
West Bengal	4	98	11	49	1	33
India	75	161	45	63	5	25
shares		100%	27.97%	39.39%	2.91%	15.67%

Note: These figures are per commensal family. The data include all families in these villages, cultivating and non-cultivating. The "India" row is a simple unweighted average of the State figures.

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

There are two things of interest in this table. First is the absolute size of borrowing. Heston estimates that in 1947 Rs., per capita income in India in 1945 is Rs. 166. Thus per family rural borrowing is approximately the same as per capita income. Pauline 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.[16] Thus on average each family is borrowing a fifth of its income. A second important point is the very large share

of non-professional borrowing which is occurring. Though professional moneylenders constitute the greatest source of funds, at nearly 40 percent, non-professionals constituted 28 percent. These data suggest non-professional moneylending was a significant activity in all parts of India.

II. A quantitative description of India's credit system

The rural credit market had easy entry. That alone would suggest that it was competitive. But how large was it? To answer that question, I estimate the size of colonial India's overall financial system, and compare it to that of mid 19th century US. The US was another largely agricultural economy, but unlike India in the 20th century, the US grew at modern rates starting in the 19th century. Thus the comparison seems reasonable.

The Provisional Bank Enquiry Committee Reports allow me to estimate the size of most parts of the credit market. The Bombay PBEC Report gives the size of the Indian 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.[17] 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 other segments of the industry, the indigenous bankers and the rural moneylenders, represent a more difficult task. But the income tax divisions of the provinces of Bihar and Orissa, the United Provinces, Madras, and Punjab estimated the capital employed in indigenous banking from their great familiarity with the records of these firms for their respective Provincial Banking Committees. These estimates are virtually certain to be underestimates both because it was in the

[16] Kolenda, Pauline. 1987. *Regional Differences in Family Structure in India.* Rawat Publications, table 7.
[17] Sylla also found that deposits were less than capital in New England until the 1890s. (Sylla, Richard. 1975. *The American Capital Market, 1846-1914. A Study of the Effects of Public Policy on Economic Development*. Arno Press, Table II-14.)

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. The various values and estimates are also given 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 1950 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 1950. I also assumed that the growth in agricultural production between 1929-30 and 1950 was identical across the Indian states. I then multiplied the per capita measure, modified for nominal and real growth between 1929-30 and 1950, by the 1931 rural populations in each of the states. These are of course severe assumptions, but they should still allow the estimate to reach a correct order of magnitude. These estimates are also in table 2.

The most interesting point to note from table 2 is how large rural moneylending was relative to the other types of financial credit in India. In all provinces but Bombay and the Punjab, it is much larger than the funds available through the joint-stock banks. And only in the province of Bombay do the funds of the indigenous bankers dwarf the funds of the rural moneylenders. This is especially interesting given that I used the lower bound of the PBEC's estimates of indigenous bank capital in the Bombay province.

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. 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

In table 3, I give some measures of per capita financial credit in India. These are derived from summing up the sources of financial credit in table 2 and dividing by the province's population. The population of Indian provinces, however, is actually a somewhat ambiguous measure. For 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 assumed that this financial credit was available throughout India on an equal basis. This is incorrect. 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 have given finance 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 simply used Heston's measure for India as a whole.

We can use these measures to attempt an answer to the question of whether or not financial credit was scarce in India relative to the availability of financial credit in India to that of the US in the 19th century. Bodenhorn provides measures of the ratio of bank money to real income by state at decade intervals. His measure of bank money is note circulation plus deposits less the notes of other banks.[18] His figures for 1860 vary quite a bit. The high values are 0.30 for Louisiana, and 0.26 for both Massachusetts and New York. But typical values range from 0.05 to 0.15. My Indian measures are noisy. There is the possibility of overcounting because the Imperial Bank loaned to indigenous bankers, who loaned to professional rural moneylenders. I may be double or even triple counting funds. On the other hand, my figures probably greatly underestimate the private bankers. But assuming that these Indian measures still give the correct order of magnitude, this comparison suggests that Indian states were not far behind the bulk of US states in the mid 19th century.

Another indication that credit was not scarce is that the price of credit does not appear to have been especially high in India. The various Provincial Banking Enquiry Committee Reports give quite a bit of information concerning the rates in India.[19] 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 are similar for most provinces, where rural moneylending rates vary from 18 to 36 percent. There are a few cases where the rates are as low as 9 or 12 percent, such as for lending on the collateral of jewelry, and for wealthier borrowers. Grain is typically borrowed at rates of 50 percent. There are also a very few cases where the rates go as high as a 100 or even 300 percent. But these are rare. The various PBECs indicate that such rates

[18] Bodenhorn, *History of Banking*, table 2.3. Bodenhorn uses bank money rather than bank assets because of the difficulty in accounting for private banking. Private banks in the 19th century US created little money, so looking at incorporated banks is a reasonable estimate. (Bodenhorn, private correspondence.)
[19] These data were compiled and summarized by the CBEC, 78-84.

are limited to itinerant moneylenders such as Pathans and Kabulis. Such moneylenders are truly hated by the Indian peasant, not like the majority of moneylenders, who were domiciled in the village, and part of its community. The All-Indian Rural Credit Survey collected information on the rates of interest for their sample villagers. 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.

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

Region	*Sowcar's* 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 a word for professional rural moneylender.

Source: Bombay PBEC, *Report*, 67.

Compare these to the rates of the Grameen Bank. The standard 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. The inflation rate in Bangladesh is about 4 percent. The Grameen Bank loan rate for property is 8 percent. On the other hand, there were fees associated with the 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 appear roughly similar to those of colonial era moneylenders.

III. Caste and the Indian credit system

It appears that colonial India had a well functioning rural credit structure. There was ease of entry and many, many participants, which would suggest it was competitive. The size of the overall market was about as large as the US commercial bank market in the mid 19th century when the US began to grow at modern rates. The cost of credit was not high, at least not relative to the Grameen Bank. In the following section I will 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 was and is an extended, somewhat formalized kinship network. M.N. 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 West."[20] 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,

[20] Srinivas, M.N.. 1962. *Caste in Modern India and Other Essays*. Asian Publishing House, 70. I should note that I use the word caste because it is the one more familiar to the general reader. But throughout, I am referring to one's obligations to *jati* members, as was Srinivas in this quote. The caste system is loosely based on the four varnas of Brahmanas (priests), Kshatriyas (warriors and aristocracy), Vaishyas (merchants) and Shudras (the servants of the others). Castes either belonged to one of these four, or were below these in the hierarchy; these latter are the so called untouchables, or scheduled castes. In practice, these four varnas are less important than were the relationships among and between the quite numerous subcastes, or *jatis.* While one would typically find a member of each of the four main castes in each village in India, the subcastes were specific to each region. The jatis were the true functional unit of the caste system. They were, for example, the endogamous unit. And the obligations of jati members to each other were much stronger than were the obligations of caste members more generally. (See, among others, John Hutton. 1963. *Caste in India*. Cambridge University Press). I should also mention that the caste system was not a monolithic institution. It operated differently in the different parts of India. But the

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.[21] 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."[22]

Caste had a role in maintaining credit and credibility in the rural market because members have a collective responsibility for one another. Nehru conducted an analysis of the surveys of 54 rural villages in the Mid-Gangetic Villey. These surveys were conducted for the Provincial Banking Enquiry Committee, but Nehru's analysis was published separately. 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, <u>the borrowers caste and credit</u>." (emphasis in the original)[23] Nehru asserted that caste supported credit, but he did not describe the mechanism. The All-India Rural Credit Survey, however, gave more specific details when explaining why social forces typically brought about repayment to moneylenders. "The social compunction is connected with considerations such as loss of 'face' or local prestige, caste disapproval, possible pressure through the

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characteristics I am interested in, i.e. one's obligation to the group and the punishment for violating group norms, are fairly universal.

[21] Kolenda, Pauline. *Caste in Contemporary India, Beyond Organic Solidarity*. The Benjamin/Cumming Publishing Co., 89.

[22] Kolenda, *Caste in Contemporary India*, p. 11.

[23] Nehru, S.S. 1932. *Caste and Credit in the rural Area. A Survey*. Longmans, Green and Co., 115.

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."[24]

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 more 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.[25] Their estimate accords with that of Aleem, for the Chambar area in Sind, Pakistan, also found a default rate of less than 5 percent.[26] 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 the Indian peasant. Compare the colonial Indian village to the rural US South in the mid to late nineteenth century. In both, moneylenders had intimate knowledge of the repaying capacity of their customers. But Gavin Wright pointed out that Southern sharecroppers credit was limited because of their mobility. He asks, rhetorically, "Would you lend $100 to an impoverished but highly mobile wage laborer in a declining county? To buy a horse?"[27] In India, a moneylender probably would. The individual in question was unlikely to move. Munshi and Rosenzweig 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

[24] AIRCS, vol 2, p. 171.
[25] Walker, Thomas S. and James G. Ryan. 1990. *Village and Household Economies in India's Semiarid Tropics*, The Johns Hopkins University press, 204.
[26] Aleem, I. 1993. "Imperfect information, Screening, and the Costs of Informal Lending: A Study of a Rural Credit market in Pakistan." In *The Economics of Rural Organization: Theory, Practice and Policy.* Oxford University Press.
[27] Wright, Gavin. "Postbellum Southern Labor Markets." In *Quantity and Quiddity. Essays in U.S. Economic History,* edited by Peter Kilby. Wesleyan University Press, 111.

to 6 percent in 1999.[28] This can be compared to the figures of Graves, Sexton and Vedder 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.[29] 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 his caste connections for credit purposes.

And even if the individual moved, in India his family probably would not. Tom Kessinger 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. He found very little change in land ownership over this period (ignoring the fact that fathers were replaced by their sons), or in the family composition of his village.[30] 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 lack of mobility and the extremely solid kinship connections in India could have greatly raised the returns to rural loans in India relative to, for example, the US South.

IV. The budget constraint of the rural Indian cultivator.

Given that there was a well functioning credit system in rural colonial India, the question becomes what did Indian cultivators use the system to purchase? To try to answer this question I exploit a remarkable data set on Indian cultivators gathered in 1951-52, just after the 1947 independence, the All-India Rural Credit Survey. There were two parts to the survey. Both parts used the same random

[28] Munshi, Kaivan and Mark Rosenzweig. July 2005. "Why is Mobility in India So Low? Social Insurance, Inequlaity, and Growth." Working Paper, 1.
[29] Graves, Philip E., Robert L. Sexton, and Richard K. Vedder. April 1983. "Slavery, Amenities, and Factor Price Equalization: A Note on Migration and Freedom." *Explorations in Economic History* 20(2): 156-162.
[30] Kessinger, Tom G. July 1975. "The Peasant Farm in North India, 1848-1968." *Explorations in Economic History* 12(3): 303-323.

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 and culturally. The survey took place between November 1951 and August 1952, and questions were asked relating to the previous 12 months. 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 expenditure and finance: what rural Indian families spent money on, and how they financed those expenditures. In particular, 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. As noted earlier, the unit of observation was the commensal family- that is the family which shared one kitchen. 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. But 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 was the extent of assets of the family in land and animals, and 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. 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. District averages only are given, not village level data. Also, the categories Big, Large, Medium and Small are not used. Data are reported for the district as a whole, and for the first five deciles and the last five deciles of the district. [31]

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 is essentially 1000 pages of tables. The authors' 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. I will report values from both the General Survey and the Intensive Survey, giving preference to the General Survey when the relevant data are available.

There was one element of non-randomness involved in the selection of the villages. The original study was in part designed to understand the cooperative credit network in India. So half of the villages chosen should be those with cooperative credit available, and half without. This will over-sample villages with cooperative credit. But because cooperative credit supplied such a small part of overall credit, this is not too much of a problem. Further, the availability of cooperative credit should diminish reliance on money lenders and family, and ceteris paribus tend to encourage agricultural investment, as these were the only loans available from cooperatives. So the data I describe below is perhaps an understatement of the reliance of Indian cultivators on informal sources of obtaining credit, and an overstatement of their expenditures on agricultural investment.

[31] The survey authors do not discuss why they chose smaller samples from poorer deciles. It does not affect the results because of the way the data averages are presented.

Table 5. Ceremonial Expenditure and Gross Capital Agricultural Investment

Part A. By Region

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%
East	all cultivators	22	92	15%	125	85%
	first 5 deciles	22	130	13%	190	79%
	last 5 deciles	22	54	19%	60	129%
South	all cultivators	26	83	13%	231	44%
	first 5 deciles	26	125	13%	384	42%
	last 5 deciles	26	41	18%	79	79%
West	all cultivators	27	171	26%	207	99%
	first 5 deciles	27	224	23%	29	86%
	last 5 deciles	27	119	34%	117	150%

Part B. By Economic Level

Commercial	all	20	99	16%	263	45%
	first 5	20	148	15%	421	46%
	last 5	20	49	20%	106	73%
Monetized	all	28	158	22%	205	84%
	first 5	28	208	19%	305	74%
	last 5	28	108	29%	106	130%
Subsistence	all	27	89	16%	124	89%
	first 5	27	125	15%	195	80%
	last 5	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.

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 three climactic/geographical regions: East, South and West India.[32] I have also broken down the data based upon the "type" of district. The Survey authors identified the districts as either completely Commericalized, Monetized but not necessarily Commercialized, and Subsistence. (AIRCS, vol. II, p. 190-91) 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.

There is some differentiation across Indian regions. Ceremonial expenditures are highest by a significant degree in Western India in absolute amounts, though relative to crop values they are similar to East India. 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.

But there is no region or region "type" were 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 region or region "type" spend much more on ceremonies relative to agricultural investments than their richer regional counterparts.

[32] These regions were divided using the weather classification system of 1890-1900 in an effort to group regions facing similar climactic conditions.

Potential substitution to agricultural investment.

The relatively large sums spent on ceremonies was 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 monies spent on ceremonial expenditure for monies spent on agricultural investment, surprising given that more capital formation was exactly what was needed to speed up the tempo of economic activity in the moribund regions. It is possible that they did not consider this option because they believed ceremonial expenditures were in fact a "conventional necessity," and saw no potential for limiting them.

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 50^{th} percentile in terms of this asset category to the top 50^{th} percentile. Further, Sumit Guha, who made a careful and impressive survey of the agricultural technology of the Deccan, made much of the fall in bullocks/acre in the Deccan at the colonial period, and attributes the observed fall in yield over the period 1880-1920 at least in part to this factor. (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 6 and 7. Table 6 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 7 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 6. Types of Gross Agricultural Capital Investment

Group	Total agricultural capital Invesmtnent (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; contruction 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. The categories of productive loan use are very similar. What is significantly different is the very limited use of loans to finance consumption expenditures.

Table 7. Potential Increase to Actual Average Farm Assets in Just One Year
Assuming Ceremonial Expenditures Were Shifted to Gross 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.

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. To what extent is this belief supported by the data? 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. 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. But Pani does not identify what the "certain items" of family expenditure are, beyond saying they are those "which are assumed to necessitate loans during the year". (Pani, p. 177)

I have repeated Pani's exercise 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.[33] The results are reported below in Table 8. 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 the Indian cultivators' budget.

Table 8.
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: [a]p-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.

Are these borrowing patterns typical? One can not 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.

Debt: Short term vs. Long term

One final point concerning Indian cultivators' borrowing patterns should be made here. One might think that the chief reason poor cultivators would borrow would be to see them through the period between the beginning of the agricultural season and the harvest. The only reason they would accumulate debt would be that ex post they found it impossible to completely repay their loans. The result of repeated miscalculations coupled with high interest rates would be "debt peonage", a phrase familiar to anyone with a knowledge of the history of the rural US South. Sugata Bose claims that credit and finance were the most critical "mode of appropriation" in the colonial context. (Bose, p. 3) A contemporaneous Indian researcher who had made a study of rural indebtedness in Birbhum, Bengal in 1933, described the situation in the following terms.

> Agriculture in this district is thus entirely dependent on the rainfall. If that is sufficient, the cultivator reaps a good harvest, pays his rent, and perhaps reduces his debt. If insufficient or untimely, he is faced with starvation, driven to borrow for the bare necessaries of life, and forced to submit to the hard terms of his creditors. He may even have to sell his cattle to maintain himself and his family. Such bad years are by no means rare, and are mainly responsible for the indebtedness which has become so universal amongst the rural communities. (Bose (1937), p. ???)

But for the US South, or rather for Georgia in the 1880s, Price Fishback (1989) found that "post harvest debt" was not a major problem. His main evidence is that there was no relationship between indebtedness the previous year, and current indebtedness. (Fishback (1989).) S. S. Nehru makes a similar point about

Indian borrowing, in this case for 54 villages in the Mid-Gangetic Valley in a survey associated with the Provincial Banking Enquiry Committee of 1929-30. (Nehru, (1932).) He found that old debt did not predict new debt. He found that old debt across the villages was fairly stable at Rs.1,000-2,000, and new debt highly variable. (Nehru, p. 94) Neither of these studies is completely satisfactory, as Fishback acknowledges. Factors affecting debt are many, and given the high variance of net borrowing in any one year, failure to find a relationship between past debt and current debt is suggestive that past debt does not lead to current debt, but the evidence is not conclusive.

The AIRCS allows one to examine the issue in a different way. Data was gathered not just on borrowing, but also the extent of loans which were taken out and repaid within the year, and the expenditure on repaying debt, where this last category was broken down into payments for debt acquired this year but still outstanding, and amounts borrowed a previous year but still outstanding. Table 6 summarizes this information. Monies borrowed and repaid within the year were a relatively small portion of the total amount borrowed; on average these constituted only 18% of the total amount borrowed within the year. But this could have been due to a miscalculation- though a very large one. Perhaps the cultivators intended to repay, but were unable. Again, however, repayments in the current year are much less than ceremonial expenditures. If those expenditures were eliminated, and those funds were added to repayments, the debt would have been lessened considerably.

Table 9. Ceremonial Expenditure and Debt Repayment from the AIRCS.

Area	Group	ceremonial expenditures (Rs. per family)	expenditures on debt repaymentment (Rs. per family)	Total Loans (Rs. per family)	Percent of loans borrowed and repaid within the year
All India	Cultivators	100	65	113	
	Big cultivators	282	174	256	
	Large cultivators	180	120	180	
	Medium cultivators	74	50	95	
	Small cultivators	51	32	66	
east	Cultivators	89	30	113	
east	Big cultivators	281	73	256	
east	Large cultivators	164	51	180	
east	Medium cultivators	65	24	95	
east	Small cultivators	43	19	66	
south	Cultivators	69	80	160	
south	Big cultivators	227	264	504	
south	Large cultivators	135	161	311	
south	Medium cultivators	48	55	116	
south	Small cultivators	28	28	63	
west	Cultivators	138	80	217	
west	Big cultivators	335	168	447	
west	Large cultivators	236	137	336	
west	Medium cultivators	105	65	186	
west	Small cultivators	79	45	133	

The observation that ceremonial expenditures are large relative to repayment across India is important in yet another debate. While it is generally acknowledged that Indian rural rent and taxes were not large relative to overall expenses, the timing of rent and taxes relative to the harvest cycle is considered by some authors to be a major reason for debt. Shahid Amin (1994) for example argues that in the sugar producing regions of eastern U.P. 1880-1920, prosperous cultivators were able to take advantage of commercialization to directly market their gur [country sugar], and so became even more prosperous. But poorer cultivators, who did not have sufficient surplus to pay their rent and taxes which fell due before the harvest, were forced to sell their crops in advance to a khandsari [wholesaler/manufacturer]. The khandsari gave below market prices, and so the poor cultivators remained poor. Elizabeth Whitcombe (1972) makes a similar argument for why cultivators in North India

were forced to grow indigo, sugar and cotton on advances with little or no profit. But it is hard to reconcile these lavish ceremonial expenditures, even of fairly poor cultivators, with the picture Amin and Whitcombe draw of cultivators so impoverished that they are unable to save sufficiently from one harvest to the next to pay fairly modest charges for rent and taxes. Either the cultivators were extremely improvident, or they felt that the ceremonial expenditures were just as necessary as rent and taxes.

Quality of the All India Rural Credit Survey.

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 the 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.

Unfortunately, the AIRCS it is the only large scale collection of data on the points of ceremonial expenditure, debt, assets and crop value that I am aware of. I think it would be impossible to prove to anyone that the Thorners are being unduly harsh. Assets and crop value

were easily observed, and these data seem likely to be reasonably accurate. The measures of borrowing and ceremonial expenditure, on the other hand, are less obvious. The many regularities the data reveal, in particular the consistent relationship between expenditure and borrowing, suggest some degree of validity, but cannot prove it.

There is, however, one modern data set that I am aware of that examined the issue of ceremonial expenditure. Vijayendra Rao, while personally collecting a data set among the potter caste in a village in the southern Indian state of Karnataka in the 1990s, 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. As a potential explanation for these expenditures, Rao speculated that, especially spending on festivals, "serve the function of reinforcing social cohesion in the community." (Rao (2001), p. 78) Rao 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. He points out in Rao (2001b) that the wedding celebrations are essential for "maintaining the networks essential for social relationships and coping with poverty." (p. 1)

Other evidence, though anecdotal, also supports the existence of large ceremonial expenditures in India. We have many observations the historical record on this point. Let me site 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 was gathered separately on expenditures for "Death Ceremonies" and "Marriage and Other Ceremonies". Death ceremonies would not typically have a monetary transfer component. Table 7 details the ratio of Death Ceremony Expenditures relative to "Marriage and Other Ceremony" expenditures, and they are fairly substantial. 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.

Table 10
Comparison of Expenditures on Death Ceremonies and Marriage Ceremonies and Other Festivals

Area	Group	Expenditure on Death Ceremonies (Rs. per family)	Expenditure on Marriage Ceremonies and Other festivals (Rs. per family)	Ratio of Death Ceremony Expenditure to Marriage Ceremony Expenditure
All India	All Cultivators	12	88	19%
	Big cultivators	37	245	59%
	Large cultivators	22	158	18%
	Medium cultivators	9	64	21%
	Small cultivators	6	45	21%
East	All Cultivators	17	72	27%
	Big cultivators	61	220	31%
	Large cultivators	32	132	28%
	Medium cultivators	12	53	32%
	Small cultivators	7	36	23%
South	All cultivators	7	61	18%
	Big cultivators	21	206	130%
	Large cultivators	14	121	15%
	Medium cultivators	5	43	16%
	Small cultivators	4	25	27%
West	All cultivators	13	125	13%
	Big cultivators	31	304	14%
	Large cultivators	21	215	12%
	Medium cultivators	11	94	16%
	Small cultivators	7	72	12%

Source: Table 6, AIRCS.

Further, this measure must surely be a lower bound of the consumption share. Much of the expense of an Indian dowry is on clothing and ornaments which are exchanged between families. These are primarily consumption items. The Punjab Provincial Banking Enquiry Committee gathered information on the spending on ornaments associated with marriages in 1929-30. These data are presented below. To interpret these values, it is useful to note that the cost of an acre of land in the Punjab at this time, as estimated by the committee, was Rs.377. (Punjab, PBEC, vol. 1, p.377). Thus, on average in many of the districts, more was spend on ornaments for a wedding than the cost of an acre of

land. And remember, average worked holdings in this area are typically well under 20 acres. The committee broke the data down by whether or not there was a Cooperative Better Living Society. One of the goals of these societies was to try to educate the Indian cultivator in wise expenditures, and in particular induce them to shift expenditure away from lavish ceremonies and in the direction of agricultural investments.

Table 11. Jewelry expenditure for marriage in the Punjab.

Tehsil (except where stated)	Number of villages in which inquiry was made	Their population	Number of families under inquiry	Marriages celebrated during 1927, 1928 & 1929	Average amount per marriage spent on jewellery. (Rs.)
Multan and Montgomery Districts	15	9,214	212	179	624
Lahore	1	400	31	33	445
Chunian	1	900	10	10	540
Lyallpur District	11	13,242	604	150	245
Sheikhupura	2	854	113	41	449
Nankana Sahib	2	450	72	41	140
Phalia	1	758	135	18	528
Bhalwal	2	1,060	202	27	310
Firozpur-Jhirka (Gurgaon)	2	350	27	5	300
(Gurgaon) Palwal	3	1,132	113	14	240
Part II. Villages with a Cooperative Better Living Society					
Multan and Montgomery Districts	2	61	61	45	70
Lahore	1	15	15	17	221
Chunian	1	10	10	11	91
Lyallpur	3	187	187	54	59
Phalia	1	120	120	19	206

Source: Punjab PBEC Report, vol. 1, Statement No. 11, p. 346.
Note: The statement notes that these figures were gathered "through the assistant registrars, co-operative societies.

III. 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, as Blunt implies, or "insane and mentally defective".

Were these expenditures irrational? Tom Kessinger, thought that one must consider the needs of the family enterprise when judging the rationality of these loans. It was the need of the family head to sustain the family "which lead him to contract loans at high interest rates for indeterminate time periods, and not naivete and stupidity as suggested in studies which focus on malevolent moneylenders outwitting inept peasants." (Kessinger, p. 327) He also points out that family expenditures affect the family's showing in the "local prestige system" (Kessinger, p. 329). An interesting point that he makes is 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. He found very little change in land ownership over this period

(ignoring the fact that fathers were replaced by their sons), or in the family composition of his village. Given this stability, and long memories, public displays of what is considered appropriate behavior will affect perceptions of family prestige for some time to come. Kessinger took it as obvious that these perceptions mattered to cultivators, and were thus a valid, rational expenditure.

Prestige, however, seldom enters the typical economic utility function. Perhaps it should. But there is another, more typical, variable which may be connected to village perceptions of a family's prestige, and that is aversion to risk. 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. Again, this would provide an economic motive for what might otherwise be simply extravagant consumption.

How important are these transfers and loans to modern Indian cultivator? Consider the findings of Jaoby and Skoufias. They used the ICRISAT sample. Their sample was collected in three South Indian villages between 1975 and 1984 by the International Crops Research Institute for the Semi-Arid Tropics. (The full ICRISTAT sample is for 6 villages.) This is considered the best data set on modern rural India. (Debraj Ray) In each of the three villages, a stratified random sample of forty households was chosen, consisting of equal numbers of landless, small, medium and large-scale farmers. 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, 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.[34] In part, villagers smoothed income through transfers between kin and

[34] 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

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. According to Rosenzweig, 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 matter deeply for the survival of the modern Indian cultivator.

Table 12.
Sources of Loans for Indian Cultivators from the AIRCS

Group	**Percent of total listed expenditure financed with borrowing**	**Sources of loans**				
		Relatives	Institutional sources	Cooperatives	Money-lenders	Others
All Cultivators	25%	18%	8%	3%	45%	29%
Big cultivators	21%	20%	10%	4%	44%	26%
Large cultivators	23%	19%	9%	3%	45%	28%
Medium cultivators	27%	17%	7%	3%	45%	31%
Small cultivators	28%	17%	5%	2%	47%	31%

Source: Table 6, AIRCS.
Note: Not all expenditures are listed. In particular, food is ignored. Institutional sources includes the government, agricultural cooperatives and commercial banks. The category others includes landlords, traders, and all other sources.

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.

And what of the Indian cultivator before government intervention? Similarities between the AIRCS data and the ICRISTAT data are striking. This is especially interesting given that the ICRISTAT data are for only one region in India, while the AIRCS data span India. Table 12 shows the portion of listed expenditure which was financed through borrowing in the AIRCS data, and the sources of funds. Not all expenditure is listed, so this overstates borrowing as a share of total expenditure. It is impossible to construct an equivalent measure using published information on the ICRISTAT data. But Rosenzweig does give mean real gross transfer income for the full sample of six villages, as well as mean real loan value. He does not give mean value of crops, only profits from crop production. However, he does list "mean full income", where this variable is defined as "the sum of profits from crop production (net of all costs) plus the number of adult males in the household multiplied by the income that would be earned if each adult male household member worked 312 days at the going daily wage rate in the village that year." (Rosenzweig, p. 1155) This measure should be smaller than gross revenues from crops because it eliminates expenses for non-labor inputs. According to Rosenzweig's figures, gross transfers were approximately 5 percent of real full income. And borrowing was 29 percent of real full income. Of the borrowing, as mentioned above, 30 percent was from formal sources. Even given the differences in measurement techniques, it does not appear that the extent or the sources of borrowing have changed dramatically between the two studies. If anything, informal transfers seem to have fallen over time, making them more important historically. If transfers were more important, sustaining the network would have been more important then as well.

Though these networks were clearly valuable, were they efficient in an economic sense? The literature on informal insurance networks takes as a point of departure the observation that economic agents can mitigate risk by saving, or by insuring themselves. Insurance is most useful for mitigating idiosyncratic risk. The second point noted is that formal financial institutions in rural areas are typically not extensive, but empirical examples of pre-industrial villagers using informal, cooperative mechanisms to self-insure are ubiquitous. Miles Kimball (1988) was the first to propose a formal model of such a mechanism. He conceived of homogenous villagers who lived in stable communities for many years

having an implicit contract to assist one another by transferring funds from villagers who have had positive idiosyncratic shock to those with negative shocks. The scheme can be a stable equilibrium if punishment for failure to make the transfer when appropriate is published by a community wide sanction which takes the form of expulsion from the insurance scheme in the future. Maintaining the solidarity of the network is obviously the chief problem of maintaining stability. Kimball's model was actually a formalization of the descriptions in Fenoaltea (1976) of the extensive research on self-insurance in the middle ages. But his model has been applied to considerations of modern informal insurance networks. The empirical literature on self-insurance in modern villages might be said to begin with James C. Scott's The Moral Economy of the Peasant (1976). He argues that pre-industrial villagers of many cultures have adopted schemes by which, in the presence of large and variable idiosyncratic shocks, all could somehow claim a right to a subsistence level of income. Other important works in this literature include Townsend (1994), in which Townsend tested for the quantitative importance of sharing mechanisms in modern Indian villages, and papers by Rosenzweig and various co-authors (2001, 1988, among others) which attempt to determine the structural parameters governing this sharing in Indian villages. While the theoretical models typically assume sharing among homogeneous agents, the empirical literature includes borrowing from a combination of relatives, village members, and money-lenders, and these are the main sources of credit for the villagers enumerated in the AIRCS.

As indicated above, one aspect of this problem economists are interested in is determining the existence and measuring the extent of this sharing. But there is also another concern. As discussed by Marcel Fafchamps (1992), some economists have speculated that the existence of these networks and their associated loans might introduce moral hazard: insurance reduces the incentive to work hard, save, and increase income to the point that idiosyncratic shocks are no longer a risk to subsistence income. Thus, the existence of these networks might hamper development. Fafchamps argues that societies were mindful of this problem and have evolved social mechanisms to minimize moral hazard, and have thus minimzed the economic inefficiencies inherent in sharing.

But the moral hazards Fafchamps envision have to do with debt repayment. He worries that individual borrowers will misrepresent their circumstances and ability to repay loans (their "revealed state of nature"). It is true that the close living conditions of the village can largely mitigate revelation problems. But the findings of this paper are at least consistent with the theory that what appears to be excessive and inefficient spending on ceremonies might actually be an investment, rational and perhaps economically efficient, in insurance. It is possible that Indian villagers were choosing across a spectrum of options intended to maximize the expected value of their discounted utility in the presence of uncertainty: agricultural improvements, children and their social network. In this case, ceremonial expenditures could be simultaneously efficient, and deleterious to long run economic growth.

Much of this paper has focused on the tradeoffs poor farmers faced between productive investments and ceremonial expenditures. This is because the large ceremonial expenditures of the very poor are in the most surprising and the largest in a relative income sense. But the social compunction to spend lavishly on ceremonies affected the relatively wealthy in India as well, and the historical record suggests that they had no more options for curtailing ceremonial expenditures than their poorer counterparts. Consider just three examples of this phenomenon. Datta (1914) relates the following story drawn from a settlement report for an Eastern Bengal districts. "A well-to-do cultivator died leaving about Rs. 600 in cash and grain. At the Sradh ceremony which followed, his son entertained several hundred guests for each of whom 2½ seers of food were provided. This meant that twice the amount of food ordinarily taken by a person was doled out ant the whole of this large sum (large for the cultivator) was squandered." (p. 160) One should not dismiss his story as criticisms of the relatively poor by the quite comfortable. Timberg (1978) noted that the Marwaris, a caste-cluster which furnished the bulk of the entrepreneurs of North and Eastern India, criticized themselves for elaborate spending on funerals. He writes:

> In Central India, the social reform movement among Marwaris started by opposing expensive customary funeral feasts, which were felt to impoverish the recently bereft. Organized demonstrations took place at Malkapur in 1920, against a local panychayat

> which took a conservative stand on requiring these feasts. At an ensuring demonstration one young man was killed. (Timberg (1978), p. 76)

Appropriate social expenditures were clearly an important matter in India. On this same point consider the comments of Mr. W. Gaskell, the Commissioner of Income-tax, United Provinces, in his written comments for the United Provinces Provincial Banking Enquiry Committee.

> The social customs of India demand much expenditure on the unproductive form of ceremonies, and as social obligations frequently force a man to spend on ceremonies every anna which he possesses or can borrow, an extension of borrowing facilities might be disastrous. I remember forcibly a discussion which I had in a village in the Jhansi district with a number of zamindars who informed me that the greatest boon which the Government had conferred on them was in the shape of the Bundelkhand Land Alienation Act which had destroyed their credit with the money lender. They informed me that they could not now waste money on ceremonial expenditure because the moneylender would not advance it to them.
>
> These examples suggest that even wealthy Indians were locked into ceremonial expenditures.

The unsuccessful efforts of the Marwaris to limit burial expenditure show why. Changing these cultural patterns seemed to require coordination: either imposed internally as the Marwaris attempted to do, or imposed externally, as is suggested by the zamindars of the United Provinces. We might explain this otherwise seemingly incomprehensible lack of individual free will if ceremonial expenditures was a signal. Kessinger wrote that it signaled prestige. What if it signaled, as I suggested before, credit worthiness? Then, one cannot be the first to stop. If this were true, no one individual could stop, or even slow this cultural practice. India was locked into consumption, and thus barred from saving.

Conclusion.

There are two main points in this paper attempted to establish. First the colonial Indian rural credit market was large and competitive. Second, a chief use of credit in colonial India were large ceremonial expenditures across the income and geographic 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. It is a common theme in the historical literature. My contribution has been the quantitative analysis of the credit markets.

The implication is that improvements to India's credit provision will not have a significant impact on economic growth. Growth requires investment. But the 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. Very large loans were offered to very poor cultivators on almost no guarantee beyond their personal word. A credit system which worked as well as this should have funded growth. It did not. It funded ceremonies.

The policy implication is that instead of expanding the credit market, a more useful strategy would be to try to alter the way India's rural poor spend their borrowed funds. The Grameen Bank does this in part. Members must meet with the center director monthly. They are taught to save. They are encouraged to eliminate dowries. In some cases there is extensive advice offered on agricultural "best-practice". All of these are less heralded aspects of the bank. But the history of the Indian credit markets in the colonial period suggest that ultimately these will be the most important contributions.

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