

6-1993

Is the “Sheil” a Shill? Informal Credit in Rural Sudan

Michael Kevane

Santa Clara University, mkevane@scu.edu

Follow this and additional works at: <http://scholarcommons.scu.edu/econ>



Part of the [Economics Commons](#)

Recommended Citation

Kevane, M. (1993). Is the “Sheil” a Shill? Informal Credit in Rural Sudan. *The Journal of Developing Areas*, 27(4), 515–534.

Copyright © 1993 College of Business, Tennessee State University. Reprinted with permission.

This Article is brought to you for free and open access by the Leavey School of Business at Scholar Commons. It has been accepted for inclusion in Economics by an authorized administrator of Scholar Commons. For more information, please contact rscroggin@scu.edu.

Is the *Sheil* a Shill? Informal Credit in Rural Sudan

MICHAEL KEVANE

Then I saw them dividing up the sacks between them. Hussein the merchant took ten; each of the strangers took five. Mousa the owner of the field next to ours on the eastern side took five, and my grandfather took five. Understanding nothing, I looked at Masood and saw that his eyes were darting about to left and right like two mice that have lost their way home. "You're still fifty pounds in debt to me," said my grandfather to Masood, "We'll talk about it later."

—Tayeb Salih, "A Handful of Dates," in *The Wedding of Zein and Other Stories*

My dictionary defines a shill as a person "who poses as an innocent bystander to help a confidence man win over a prospective victim."¹ The Sudanese system of informal credit, known as *sheil*² credit, has been described by many academic writers as an exploitative, usurious form of lending, much as Tayeb Salih implies about the loan transaction between Masood and the grandfather. These writers argue that an important cause of the persistence and deepening of poverty is the monopolistic position of village lenders. But is that really what the *sheil* is? Or has the *sheil* been misrepresented in order to be consistent with a broader perspective about the nature of Sudanese rural society? That is, might not the *sheil* be a shill for these writers, in the sense that it is posed, wrongly, as a metaphor for the personalistic exploitation they see as pervading rural society. Realizing this, we might hesitate to agree with the broad-brush characterizations that have justified misguided and counterproductive policies.

Research Assistant, Department of Economics, University of California, Berkeley, CA 94720. The author would like to thank participants at a University of Khartoum seminar for critical comments and advice, and three anonymous *JDA* referees for suggestions for improving the paper. Research in eastern Sudan was carried out under a PLAN International Development Fellowship, and the cooperation of the Wad Medani PLAN-Sudan office is gratefully acknowledged. Financial assistance from the Fulbright Collaborative Research Program and the Joint Committee on African Studies of the Social Science Research Council and the American Council of Learned Societies (with funds from the Rockefeller Foundation and the William and Flora Hewlett Foundation) supported the research in western Sudan. Ibrahim Abidallah, Ahmed Musa, and Al-Dau Mohamed helped in data collection, and El Tighani Mirghani El Amin and other researchers at the Western Sudan Agricultural Research Project in El Obeid provided valuable support and assistance.

The purpose of this paper is not to be polemical, but to explore this possibility, in the hopes of influencing both the manner in which informal credit issues are researched and the way policymakers conceive of interventions in informal credit markets. Section 1 discusses the conventional wisdom on rural credit in Sudan. Section 2 summarizes some theoretical and methodological problems with this conventional wisdom. Section 3 presents some “revisionist” evidence from both eastern and western Sudan. This evidence, and the earlier discussion on the conventional wisdom, suggests some new approaches to research on the topic, and these are explored in the fourth section. Section 5 presents concluding comments.

The Basis of the Conventional Wisdom

The subject of informal credit for peasant farmers in Sudan has achieved a certain notoriety owing to the assumption that lending is problematic in a predominantly Islamic country.³ It is widely held that merchants and would-be money lenders, in deference to religious prohibitions against usury, developed a system of lending whereby standing crops would be purchased early in the season. This supposedly highly exploitative system is known as the *sheil* system. During the growing season, when the farmer is in greatest need of cash and food, the merchant or lender enters into an agreement with the farmer to buy a certain amount of the farmer’s standing crop at a set price per sack. This price will generally, though not with complete certainty, be lower than the price in the market after the harvest. The lender pays the farmer at the time of the agreement and after the harvest collects the sacks and stores them until prices are most favorable.

The conventional wisdom regarding the prevalence and nature of this system of informal credit in Sudan is expressed in the following statements from A. B. Zahlan’s collection of papers on Sudanese agriculture:⁴

The majority of smallholders resort to traditional borrowing under the *sheil* system. The implied interest rate differs according to location and time of borrowing but can be as high as 300 per cent for loans made at the peak of the season (mid-August/early September).⁵

In the Gezira Scheme . . . the rate of interest on informal loans ranged from 115 per cent to 280 per cent despite the fact that a branch of the ABS [Agricultural Bank of Sudan] was present in the area and would offer low interest loans and the built-in credit system of the Gezira board is available for cotton and wheat crops.⁶

Statements that moneylenders always charge high interest rates to offset the high risks they take lack empirical data in support and many surveys in rural areas have contradicted this widely perpetuated myth.⁷

Surveys carried out by the ABS in this region [Kordofan] showed that 50 per cent of the cultivators received *sheil* credit and realised only 50 per cent of the market price. . . . The system is as strongly entrenched in this region as it is in other parts of Sudan.⁸

The local trade is controlled by village merchants and agents of big merchants and exporters. The *sheil* credit system is one of the main reasons for village merchants getting large shares of the tenants’ groundnut sales.⁹

These selections are representative of the literature; almost every article or book on the rural economy in Sudan focuses on the exploitative nature and pervasiveness of the *sheil* system when discussing informal credit.

Only a handful of empirical studies, however, carefully investigate the extent and volume of this practice. As far as the rainfed sector is concerned, only the extremely brief

study by Handouk, Beshir, and Abudiek is explicitly concerned with credit.¹⁰ The authors interviewed 100 farmers in November 1984. They found that 34 percent obtained credit for agricultural purposes from the sheil system. Of these, 88 percent borrowed from village merchants while 12 percent borrowed from persons outside the village. No information is given regarding the sizes of loans, repayments, or other aspects of the system. A more general study by Awad found in a survey of 391 households in the Southern Kordofan region that only 11.8 percent of all households obtained informal loans for agriculture, two-thirds of these in cash and the other third in kind. Again, however, no information is given as to the amounts involved or the methods of lending.¹¹

The more exhaustive works dealing with sheil analyze the system in the irrigated schemes of eastern Sudan.¹² Adam and Apaya, in a study of 96 Gezira scheme tenants, reported that well over 80 percent of those having between 5–20 *feddan* (a feddan is 1.038 acres) obtained loans for *dura* (sorghum), around 45 percent for wheat, and over 35 percent for groundnuts.¹³ For *dura* and groundnuts, these farmers usually obtained loans equal in value to half or more of their crop. While not calculating interest rates, they demonstrated the exploitative nature of the system by calculating the ratio of the price received per sack by the borrower in a transaction and the price that prevailed in the market after the harvest. In most cases the price was less than half the market price, especially for the smaller tenants, who were generally the lower-income group. The difference between the prices represents, of course, a clear and immediate profit to the merchant. This is the major characteristic of the system that emerges from the literature; the merchant always derives a profit immediately upon repayment of the loan by selling, at the market price, the sacks received from the borrower. Adam and Apaya explained how this system of direct and individual exploitation continued:

Little institutional credit is available to [the farmer] for production and marketing purposes and he is not able to obtain consumer credit from institutional sources at all. Consequently, the tenant turns to village merchants and other operators of traditional credit. . . . The terms on which he obtains credit from the traditional system are not fair to him, but he continues to borrow from this source because alternative sources are not available.¹⁴

El Medani, using data from 90 Gezira farmers interviewed throughout 1973–74, found that almost two-thirds of all tenants borrowed money through the sheil system.¹⁵ By analyzing the farmers' cash flows, El Medani determined the difference between farmers' available funds and cash requirements during the growing season. This deficit was mostly met by advances from the Sudan Gezira Board. El Medani noted:

Although the contribution of 'shail' is meagre in reducing the deficit, a good proportion of the farm surplus is absorbed in repayment. . . . Nearly 70% (*dura*), 67% (wheat) and 34% (groundnuts) of the remaining marketable surplus of the poor dealing in 'shail' is absorbed in repayment to these merchants.¹⁶

According to El Medani, "the interest rate in the average period of the loan reached 80% or approximately 20% per month," and so the annual rates of interest ranged between "300% and 7000% with a weighted average of 726%."¹⁷ He did not present the most important data needed for calculating the interest rate, namely, the amount paid to the lender and the market price of *dura* at the time of repayment, so it is difficult to interpret the interest rates reported.

More recently, Saleem has used data from a 1981 survey of six villages in the Gezira and Rahad schemes to argue that the implicit interest rates of sheil loans are far higher than those implied by the "lender's risk" model.¹⁸ Saleem found that when compounded

monthly, interest rates averaged between 172–201 percent on a per annum basis, depending on the crop. Using the default rate reported by lenders, Saleem observed that only around 12 percent of these interest payments could be accounted for as compensation for default risk. The rest, he argued, was due to monopoly rents.

The finding of these studies that small farmers in Sudan lose a considerable part of their surplus because they have no option but to engage in exploitative lending arrangements has been used to promote the expansion of government credit programs. In the words of El Shibly:

These extremely high rates of profit to money-lenders signify the very poor connection between the organized and the unorganized money markets in the Sudan. As a result, the resort to orthodox and conventional monetary policy measures to bring down these rates does not seem likely to be fruitful. . . . However, this is not to say that the gradual abolition of the system is not attainable. Indeed, the volume of official cheap loans can be increased through a wider dispersion of the Agricultural Bank and commercial banks' branches.¹⁹

Theoretical and Methodological Problems with Sheil Lending Research

There are a number of problems with the way sheil has been presented that suggest a need for a more critical look. The studies reviewed earlier follow the conventional "lender's risk" approach of breaking down the nominal interest rate into the various cost components, with the residual being a measure of monopoly power. They use household surveys to collect information on interest rates. Moneylenders and local commercial banks are canvassed in order to determine the costs of lending. Included in the costs is the rate of default. If the interest rate is found to be high relative to the costs of lending, the market must be monopolistic and a rural credit program is needed. If the interest rate is low, then the market is competitive and better left alone.

There are, I believe, six problems with this methodological approach and the theory that underlies it.

First, since the lender rarely relies solely on lending as a source of income, it is difficult to disentangle the costs of lending from costs incurred in other activities.

Second, it is not clear what the appropriate measure of opportunity cost should be, especially in Sudan where activities are highly seasonal. Profits from rainy season farming may be very different from dry season crop speculation.

Third, care must be taken in interpreting repayments as interest charges, since sheil loans do not explicitly include interest charges. Sheil loans are similar to a forward contract, or a crop mortgage. The borrower takes an amount of cash (A) and agrees to repay a number of sacks (B) of produce, usually after harvest. The amount A/B is the forward price at which the lender is purchasing produce. The return to the lender then depends on the market price of the product (p) at the time the loan is repaid (assuming the product is easily marketed). In this case the absolute profit is

$$pB - A,$$

and the return on capital (the implicit interest rate) over the period of the loan is

$$\frac{pB - A}{A}.$$

It is not appropriate to take this simple interest rate and turn it into an annual compound rate (where interest is added to the principal) unless there is evidence that rates are, in fact, compounded. Not compounding can make dramatic differences in reported interest charges. For example, suppose the return on a sheil loan were calculated to be 60 percent for a loan of three months. At a simple interest rate, this translates into 20 percent per month, or 240 percent per year. If we assumed that the relevant interest rate was a compound rate, that is 17 percent per month, which after three months yields 60 percent, then the annual rate would be 558 percent. This is ridiculous of course, since in fact the rates are not compounded.²⁰

Fourth, the change in the price of the product from the time of repayment (usually after harvest) until the postharvest peak price is irrelevant for calculating the return to the lender from the loan. The lender could always have refused to make the loan and used the money to purchase the crop after harvest and store it, thereby earning that return. Similarly, the borrower could have refused to borrow, and then not have had to repay the loan, and instead stored the crop until prices rose. So the postrepayment change in crop price should not enter the calculation of the lender's return.

Fifth, it should be remembered that the preceding discussion deals with "after the fact" returns on capital. The sheil contract has a risk-sharing component that is not present in the ordinary interest rate contract. At the time of making the contract, those involved do not know what the prices will be at harvest. If the market price turns out high, the merchant will make a large profit. If the price turns out low, however, the lender may end up taking a loss. It is difficult to know how to measure the costs of this price risk. One could attempt to measure the risk premium using a standard formula from utility theory where the risk premium is equal to one-half the estimated coefficient of relative risk aversion times the variance of income from loans. Another approach that some researchers use is to look at historical rates of default, but this does not tell the researcher how the lender values these uncertain losses.

Sixth, other indicators of the conditions under which loans are made—that is, their structure (the number of actual and potential lenders and borrowers) and conduct (the form of contracts, enforcement, and collateral)—are rarely examined to confirm or negate the assessment that a monopolistic market structure exists.

Some "Revisionist" Evidence

In addition to the methodological problems of the work that forms the basis for conventional wisdom about sheil, not all studies corroborate the view that informal credit in Sudan is exploitative. A 1986 survey of El Obeid district found very little informal credit, and of the loans that were reported, "no interest was charged on 89% of the credit extended by informal sources."²¹ Tully, in the context of an investigation into the changing relations of exchange in Darfur, noted:

It [sheil] is not exceptional as a source of profit from the merchants point of view. . . . Those who extended [ground]nuts on a two for one basis made less money than it seems, since nuts were worth LS 5.00 or more at planting [versus 3.5-4.0 at harvest].²²

Four studies undertaken by me—a survey in the Butana area along the Blue Nile in 1985 and three studies in the Sheikan area of Kordofan completed in 1990—also suggest that the sheil may not be as monolithic an institution as the conventional wisdom suggests. Let me review each in turn.

Eastern Gezira. During the 1985 agricultural season that followed the drought and famine of 1984, I conducted a survey of informal credit in an area of rainfed agriculture east of the Blue Nile across from the Gezira scheme and bordering the Rahad scheme and the Butana pasturelands. The survey was designed to measure the extent, volume, types, and sources of borrowing.²³ Four types of loans were distinguished: (1) loans of dura (sorghum), where repayment was the cash value of the dura at the time of borrowing, simply a buying on credit with no interest charge (these will be called dura-LS loans, where LS stands for Sudanese pounds); (2) sheil loans, where the loan was reckoned at the dura price prevailing after harvest, and where most respondents indicated that no explicit price per sack was agreed on beforehand (LS-dura loans); (3) no-interest cash loans with cash repayments (LS-LS loans); and (4) no-interest loans in kind (dura-dura loans).

Tables 1 and 2 present the magnitude and number of these loans. The data has been classified into two regions: the first is the area closer to the Blue Nile, where plots cultivated are smaller, animal husbandry is less important, and work is available on small irrigated farms along the river; and the second is the area along the Butana, where most farmers have larger rainfed plots and often migrate to the irrigated schemes during the off-season.

Given that the 1984 crop had failed almost completely in northern areas of Sudan, it was not surprising to find that over 80 percent of all the families surveyed borrowed in

TABLE 1
EXTENT OF BORROWING AMONG SURVEY RESPONDENTS
(In Percentages)

Region	Taking Loans of Any Kind	Taking More than One Loan	Taking More than LS 200 in Value	Taking More than LS 400 in Value
1 (N = 309)	82	28	35	11
2 (N = 400)	80	35	50	30
Total (N = 709)	81	32	44	22

NOTES: N = number of respondents; LS = Sudanese pounds.

TABLE 2
VOLUME OF CASH AND DURA LOANS, TOTALS AND AVERAGES

REGION	CASH			DURA		
	Total Loans	Average Loan	Average per Borrower	Total Loans	Average Loan	Average per Borrower
	LS-LS ^a			Dura-LS ^b		
1	34,079	122	154	13.4	1.3	1.3
2	61,257	200	226	171.8	2.8	2.8
Total	95,336	163	193	185.2	2.7	2.7
	LS-Dura ^a			Dura-Dura ^b		
1	3,805	152	165	67.0	3.0	3.0
2	30,786	196	238	123.7	2.6	2.7
Total	34,591	190	228	190.7	2.7	2.8

^aIn Sudanese pounds.

^bIn 100 kg sacks.

some form or another, and 44 percent borrowed more than LS 200 in value, where loans in kind were valued at the then current market price of LS 150 per hundred kilo sack of dura. (At the time of the survey, the official exchange rate was LS 4 = US \$1, so a loan of LS 200 amounted to approximately \$50.) Table 2 shows that the average loan size and total amounts borrowed were higher in the less developed Butana region, where, presumably, there was a higher demand for credit, as opposed to a higher supply.

Figure 1 gives the percentage distribution, by number of loans and by total value of the loans, of the four different types of loans. The figure clearly shows that the LS-Dura loans, those sheil-like agreements, constituted a very small proportion of the number of loans (20 percent) and of the value of loans (19 percent). The notable feature of figure 1 is that most loans, i.e., the LS-LS loans, appear to have been extended with no expectation of direct *monetary* gain for the lender. Indeed, some loans, like the dura-dura loans, would lead to losses if the dura were valued at postharvest prices.

Those loans that did have an implicit interest component may be broken down according to the source of the loan. The survey respondents were asked whether the loan came from a merchant, a rich person living in the area, or another farmer. This very crude

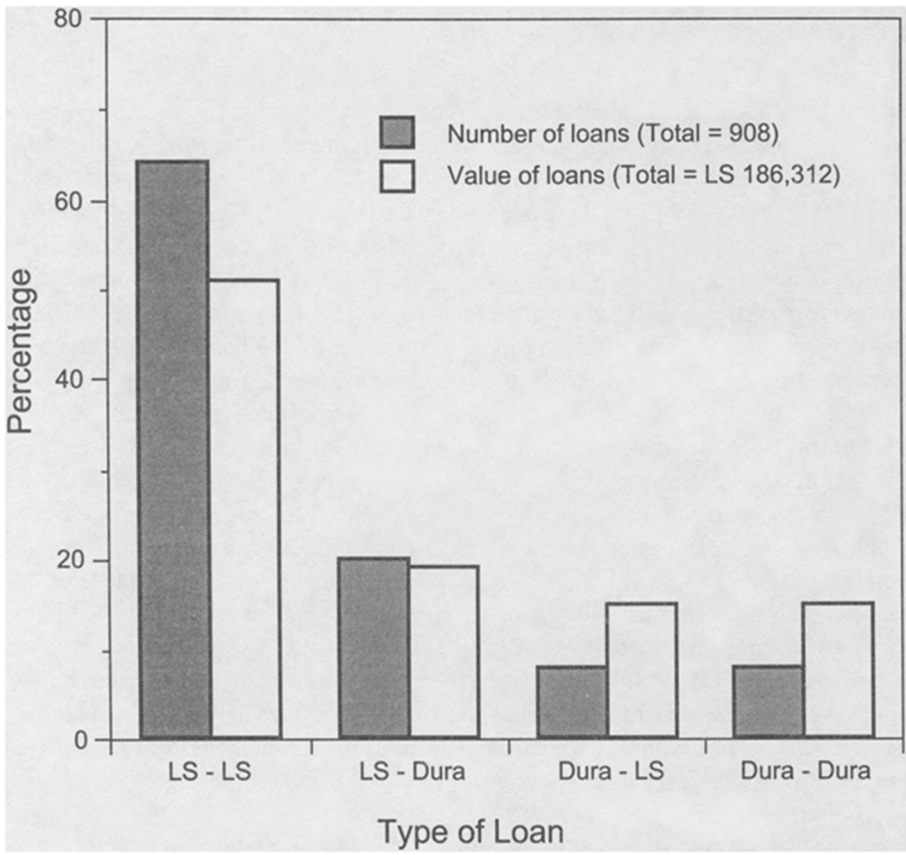


Fig. 1. Distribution of Types of Loans in Eastern Gezira Area by Number and Value.

breakdown was intended to enable the borrowers to identify the defining characteristic of the lender; if the farmer sees the lender as a fellow farmer, rather than as a merchant, then the implicit interest rate would presumably reflect that social relationship. Overall 49 percent of all loans came from merchants, and table 3 shows that proportionately more of the loans of higher value came from them. Figures 2 and 3 show that there were wide variations in the implicit postharvest interest charges for the dura-LS and LS-dura loans.

TABLE 3
DISTRIBUTION OF SOURCES OF LOANS BY VALUE OF LOANS
(In Percentages)

SOURCE	VALUE (LS)		
	1-199 (N = 565)	200-399 (N = 221)	400+ (N = 120)
Merchant	47	53	55
Rich person	29	30	22
Other farmer	24	16	23
Total	100	99	100

NOTE: N = number of loans.

Figure 2 gives the breakdown of prices used to value repayment of dura-LS loans by showing the percentage of loans from each type of lender according to the effective price received per sack. The average price received per sack, upon cash repayment of the 185.2 sacks of dura advanced on credit during the rainy season, was only LS 94.2, well below the price of around LS 150 that prevailed when the loans were taken. Most of the lower prices were charged by farmers (54 percent); merchants generally obtained higher prices for the dura advanced. The apparently large number of merchants who advanced grain and were repaid less than the value of the grain at the time of the loan might be explained by the fact that the market price dropped to LS 35 after the harvest, at the time of repayment. The farmers who borrowed may have been in strong "negotiating" positions when it came time to settle accounts, and merchants accepted prices that were higher than the prevailing postharvest price.

A similar picture emerges from an analysis of the repayment of LS-dura loans, as shown in figure 3. For the LS 34,691 borrowed in this form, the lenders received (or could expect to receive, according to the borrowers) 902.25 sacks of dura. Thus, the lenders paid an average of LS 38.4 per sack when "buying" grain in advance of the harvest. This price was just a little above the postharvest market price of LS 35. Figure 3 shows that more than half (99 out of 182) of all LS-dura loans were reckoned at about the market price (LS 35-40) while the rest were almost equally divided between higher and lower prices. Loans from merchants were more often characterized by lower prices (more sacks repaid), while "rich persons" were more often sources of loans repaid with higher effective prices (fewer sacks repaid).

Bireka Village. From October 1989 to December 1990 I lived in the small village of Bireka, about 40 kilometers south of El Obeid, the regional capital of Kordofan. There were four kinds of credit in Bireka. Petty traders borrowed merchandise on credit from their suppliers in El Obeid. There were no formal terms of repayment, though borrowers

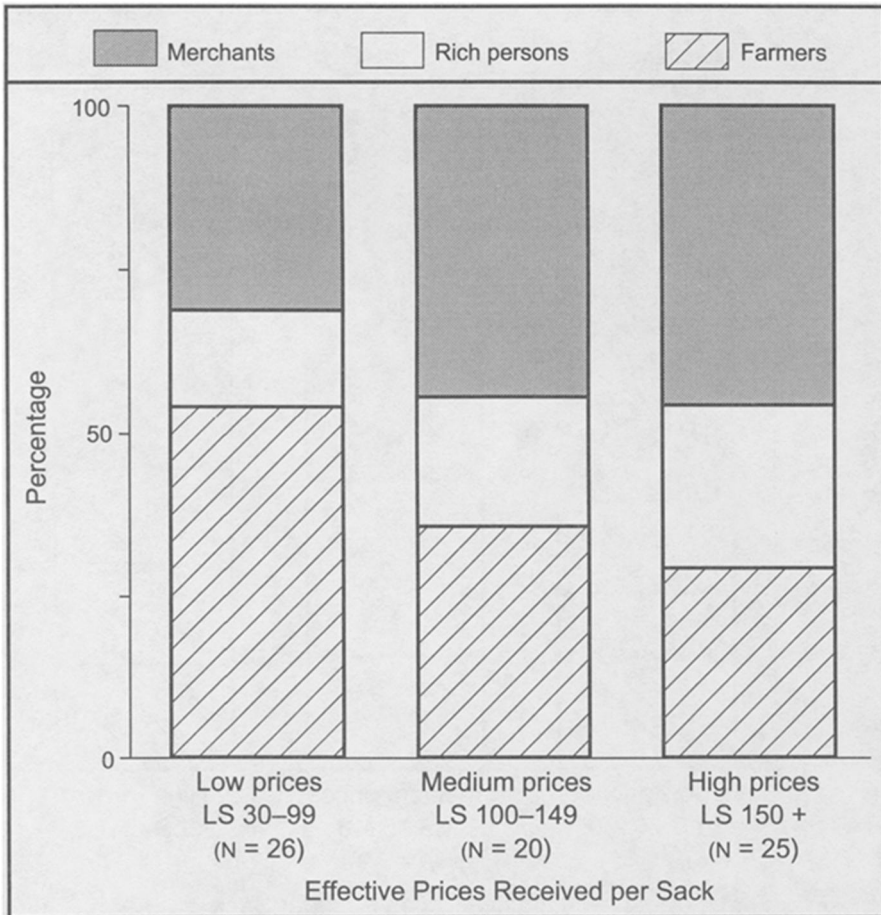


Fig. 2. Percentage of Dura-LS Loans from Each Type of Lender according to the Effective Price Received per Sack.

indicated that the relationship with the supplier would suffer if repayment were not prompt. Virtually all borrowers stated that they would repay without interest. Trade credit was not without risk; the borrower could find that market prices had suddenly fluctuated, and he might not be able to sell the stock for the purchase price. Or the goods might not be easily sold because of low demand, and the borrower might have to use the borrowed capital for consumption. The lender must then try to enforce repayment. Late in 1990, for instance, a used-clothing merchant from El Obeid spent two days traveling to the regional markets in search of several individuals who had borrowed clothing on credit, with a value of LS 1,000–2,000.

Returned migrants were a second source of loans. The head of the wealthiest household in Bireka, with two sons returned from Saudi Arabia, had given a loan of LS 1,000 to the village butcher. He claimed not to want interest; he just wanted to be “assured of a steady supply of meat.” The butcher gave the household a kilo of meat every Monday and Friday, the equivalent of LS 200 per month. The butcher in turn provided no-interest

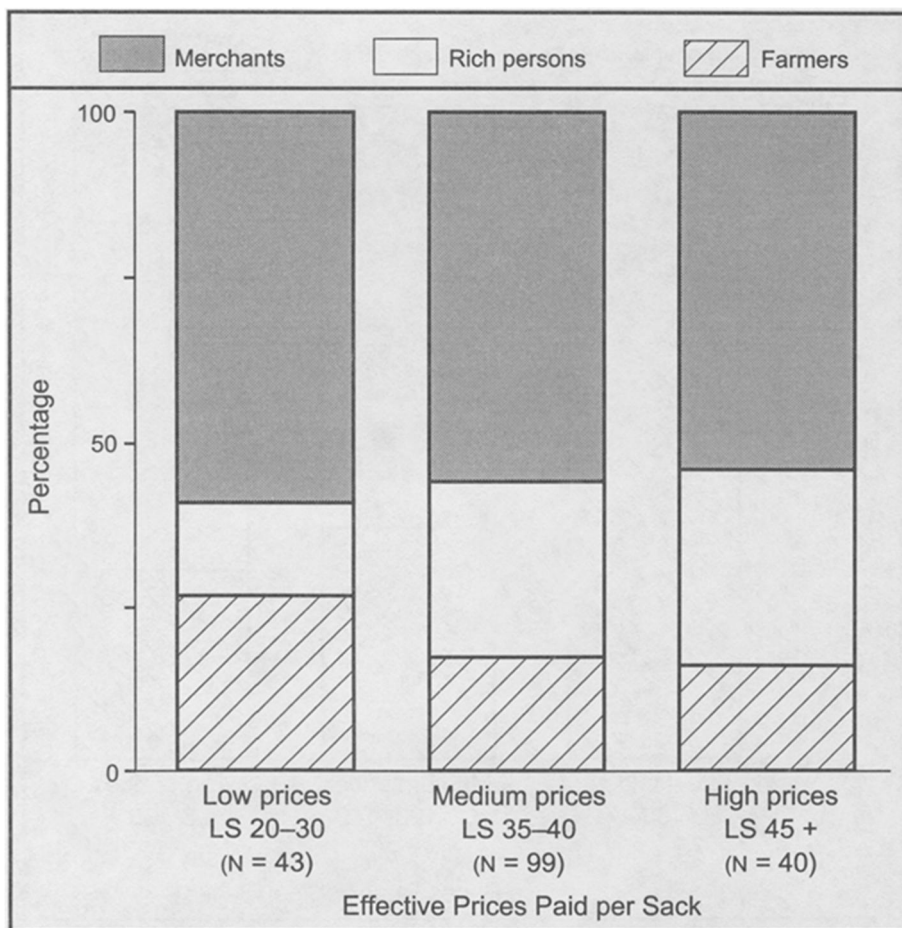


Fig. 3. Percentage of LS-Dura Loans from Each Type of Lender according to the Effective Price Paid per Sack.

“store credit,” along with his nephew, who owned a small shop at the truck stop along the road to El Obeid, to the women who operated the tea stands along the road. The women borrowed meat, sugar, tea, coffee, and oil in the mornings, and repaid in the evening or the next day. Many of these noninterest short-term loans, though, were outstanding for weeks.

Family members were another source of no-interest loans. Three Hausa men, for instance, borrowed money from relatives from other villages. Two of these loans were used to meet the costs of weddings. Relatives were also important sources of credit after it became clear that the 1990 rainy season would fail and there would be no harvest.²⁴ One man wrote to his brother who had migrated to Khartoum over 20 years before to work as a police officer. Within two months the brother had sent LS 1,000 and a promise of more help. The ability or willingness to borrow from wealthier relatives should not be overestimated, however. One poor Hausa farmer stated that he had five relatives on his father’s side, all of whom were prosperous merchants. “*Shaba’aniin*,” he said about

them, "full and satisfied." They lived in a village only an hour walk away, yet he had not received any help from them, nor would he consider asking them for help. As his trading capital invested in a small stock of secondhand clothing dwindled, he earned lower profits and he and his family reduced their consumption.

The only lender of explicit interest-earning credit was the lender of six *sheil* loans to Bireka villagers in the 1989 rainy season. He was from a neighboring village. He did not hesitate to show me his notebook with the names of the borrowers along with the number of groundnut sacks they had agreed to repay. The lender had advanced them LS 60 per sack, and most had borrowed only one or two sacks worth of cash. At the time, LS 120 was roughly enough to purchase one month's grain for an average family. Six of the borrowers were poor villagers who worked as daily laborers. The seventh sometimes hired labor, and in a separate interview denied ever having borrowed. All of the borrowers were heavy drinkers of *merissa*, the brewed sorghum beer, as was the trader. They spent considerable time in each other's company during the long all-morning drinking sessions that would be held every few days.

The trader stated that he had agreed to lend the money because all of the borrowers had received groundnut seed from the Extension Department of the Regional Ministry of Agriculture and had planted relatively large areas to groundnuts. It was the first time he had ever lent money. The six Bireka borrowers repaid, but a seventh borrower, from the trader's own village, had not. The trader said he had no intention of pursuing the matter: "If I try, he will raise a fuss, and cause a lot of trouble, and complain about me." The lender did not lend again in the 1990 season, though this may have been because the rains were poor.

Considering these various sources of loans, table 4 shows that only 17 out of 54 Bireka households borrowed during the 1989 and 1990 seasons; 10 of these loans were without interest, 2 trade loans were interest bearing, and the 6 *sheil* loans were at variable rates—the price of a sack of groundnuts turned out to be LS 110, which for a three month loan would be roughly 30 percent per month in interest.

TABLE 4
NUMBER OF HOUSEHOLDS BORROWING IN BIREKA VILLAGE BY SOURCE

	No Borrowing	<i>Sheil</i>	Trade Credit	Returned Migrant	Family
Hausa	20	0	3	2	3
Burgo	7	5	0	0	0
Arab	12	1	2	0	1
Total	39	6	5	2	4

There was also official agricultural credit available in Bireka, but it was not used in 1989 nor was it used in 1990. The Agricultural Bank of Sudan (ABS) had organized a cooperative to distribute credit for the production of sesame. In the 1987 season loans were disbursed, but because the season was poor, the bank decided not to enforce repayment and to roll the loans over. The farmers again borrowed in 1988, and the season was average. The ABS decided to strictly enforce repayment of loans from both seasons, including threatening to take borrowers to court to force them to sell assets. Over the

course of the year all of the borrowers from Bireka repaid, some very late. The result, however, was that the cooperative could not get enough members to agree to borrow a third year for the 1989 season. Only 16 out of 50 wanted to borrow again; the rest thought it too risky. They did not want to lose their assets if the season failed. The ABS refused to lend to the 16, saying it was too small a number to justify the costs of disbursing and collecting the loans.²⁵

Four Villages near Jaibat. As noted earlier, the 1990 season turned into a complete crop failure over most of Kordofan. It was obvious very early in the season that production would be severely affected; the price of grain went up to seven times the previous postharvest price. Clearly the year ahead would be a time of subsistence living for many. It was during this early period of uncertainty that we conducted a cropping-systems survey of four villages about three hours walk south from Bireka, clustered around the market village and administrative center of Jaibat.²⁶ The rains had been slightly better, and some households expected to collect small harvests.

The survey respondents reported a fair amount of "*musaada*," or "help," extended during this period of uncertainty. Out of 98 male-headed households in the sample, 36 had received cash or grain from kin, merchants, or persons from other villages. Out of 17 female-headed households, 2 had also borrowed. Together they had taken only 48 loans—16 from kin, 32 from nonkin sources. Earlier in the season 4 households had also borrowed from the Agricultural Bank of Sudan.

The amounts of the loans or help varied from LS 100 to LS 1,000 and from a few kilos to several hundred kilo sacks of grain. (During this period the price of a sack of grain varied from LS 1,200 to LS 1,800, and the official exchange rate had been devalued to LS 12 = US \$1.) The 38 households that borrowed received the equivalent of LS 42,690, or about LS 1,150 per household, when the grain loans were valued at prevailing market prices. A majority of the loans were taken by households whose heads worked as day laborers, but these tended to be smaller in size than the loans received by wealthier farmers. Fifteen households stated that they had to borrow in order to purchase the occasional government distributions of subsidized grain.

The important fact about these loans was that virtually all were extended in the form of no-interest loans with no fixed period of repayment. In the sample of 115 households, only 2 indicated that their loans were interest bearing or that they expected to repay more than they had borrowed.

A Sample of Laborers Confronting Crop Failure. When the seriousness of the drought became apparent, we conducted a survey of a quota sample of 60 household heads who worked as day laborers in six villages in the area around Bireka.²⁷ We asked the laborers about four sources of actual or potential credit or assistance: migrants, kin and neighbors, immediate family living outside the village, and nonkin. The answers may be interpreted as giving an idea of the extent of emergency consumption credit or transfers intended primarily for subsistence. Only 6 households stated that they could rely on help or loans from returned migrants. There were 9 households that had unmarried sons who lived away from the village and who regularly sent cash to their families, usually on the order of LS 200–300 per month. Of 19 households that had married children living away from the village, only 3 indicated receiving any assistance from them. The most important source of assistance was explicit borrowing—24

households borrowed amounts ranging from LS 100 to LS 3,500. The total borrowed was LS 19,420, with the average loan being on the order of LS 800, equivalent to perhaps one month's consumption of grain.

Only three of the loans were interest-bearing: one from a merchant at 12 percent interest per month, another from the village development fund (known as *sandug kheiri*) that would be repaid at 15 percent per month if not repaid within a month, and the third from a merchant who wanted half of the profits derived from the loan for trading capital. All of the other loans were at no interest.

One of the interesting patterns in the borrowing of the relatively homogeneous laborers was the strong correlation between borrowing and wealth, measured in terms of livestock (mostly goats and for the laborers of one village, cows). As can be seen in table 5, where the laborers are broken down into four groups numbered 1 to 4, with the higher-numbered groups having larger livestock holdings, those laborers with larger livestock holdings both sold more livestock (because they had more to begin with) and borrowed more. The exception was group four, which consisted of laborers from one village whose residents specialized in cattle herding. These laborers owned two or three cows each and had relatively low borrowing.

TABLE 5
BORROWING MATCHED WITH LIVESTOCK HOLDINGS
AND SALES FOR SAMPLE OF 60 LABORERS

Group	Average Value of Livestock Holdings	Average Value of Livestock Sales	Average Borrowing
1 (N = 20)	0	158	180
2 (N = 20)	361	327	327
3 (N = 11)	1,453	869	1,098
4 (N = 12)	8,521	5,671	358

The picture that emerges from considering all the preceding evidence is that credit markets are quite different from the monolithic sheil system described in the literature. In particular, sheil loans were found to be almost totally absent in Sheikan in 1990, and the few taken in 1989 seemed to be more idiosyncratic than institutional. The sheil loans taken in eastern Gezira in 1985 bore little resemblance to the exploitative system of the conventional wisdom. Two striking features were the widespread prevalence of no-interest loans and the relatively low volume of lending in Kordofan as compared with eastern Gezira or with the surveys just reviewed of farmers in the irrigated schemes.

New Approaches to the Study of Informal Credit in Sudan

This "revisionist" evidence and the ambiguities of previous research suggest that informal credit in Sudan is more complex than the simple picture of exploitative moneylending through sheil contracts. It is perhaps time to rethink what the objectives are in empirical work on informal credit in Sudan, and to think about how the research scope could be broadened so as to avoid focusing exclusively on interest rates. I would like to suggest three fruitful avenues for future research.

Informality in Contract Form Rather Than Variation in Contract Form. During the 1980s there was considerable interest in understanding the complexity, interlinkages,

and variation in credit, land, and labor contracts. In particular, a large body of theory arose explaining why variation in credit contracts, in both competitive and monopolistic settings, is to be expected. Credit contracts may delimit maximum loan sizes, collateral requirements,²⁸ interlinkages with transactions in other markets, provisions regarding enforcement, unforeseen contingencies, renegotiation,²⁹ and monitoring, because loans to different people are of different *quality*, and different kinds of contract attract different kinds of loan applicants and have different incentive effects. These varied contract forms may be both screening mechanisms and enforcement mechanisms, to use the terminology of Stiglitz and Hoff.³⁰ The lender may avoid the “adverse selection” of ending up with a mix of borrowers weighted toward bad risks by offering a variety of contracts that induce the borrowers to “self-select.” By carefully constructing contracts, lenders might be able to mitigate the losses resulting from lending to bad risks.

Differences in borrowers may also be the basis for profitable price discrimination through variation in contract form. Borrowers are usually more risk averse than lenders and are often willing to pay a premium to avoid risk. In sheil loans that specify the number of sacks to be repaid, if prices turn out to be very low the borrower does not have to increase the number of sacks to be repaid. Under some circumstances, then, the sheil contract may be preferred to an interest rate contract; just as the Islamic profit-sharing loan may be preferable to a fixed-interest loan. Certain kinds of borrowers will prefer certain kinds of contracts.

These theoretical results explaining variation in contract form are compelling, and the clean predictions about contract choice derived from the theory constitute an attractive research agenda. Nevertheless, research on these lines is inappropriate for many parts of Sudan. The striking feature about loans in eastern Gezira and western Sudan is the informality of the contract. There is usually no explicit statement of contract length, terms of repayment, or any of the other provisions previously mentioned. What this suggests is that there is nothing definite about contract form; no contract form has become institutionalized. The absence of an institution indicates a state of flux, and that flux is the proper object of study.³¹

Let me illustrate this state of flux with an example from Bireka. A fairly well-off farmer and trader, Salih Adam, had borrowed from a merchant in the nearby market town. He had wanted money to finance the purchase of donkey saddles and bridles, his stock in trade. The agreement with the merchant was for Salih to pay a monthly interest rate of 15 percent. During the time I was in Bireka, however, Salih started studying to be a *faqih*, a Koranic teacher and charm maker. In conversations with the imam of the neighboring village, the subject of interest was raised. Salih decided, and the merchant apparently agreed, that the loan should be transformed into a profit-sharing arrangement. The demand for donkey riding gear decreased, however, as the drought reduced purchasing power. In several conversations with me, Salih insisted that he had not made any profits in his trade and so had not paid any money to the lender. At the time of my departure, Salih said he would not pay any of the loan back.

While the loan transaction, its transformation from an interest to a profit-sharing arrangement, and subsequent nonrepayment are hardly representative of the variety of informal arrangements that were evident in Bireka, it does illustrate the point I want to make: there was nothing institutionalized about the transaction, and therefore it constituted one part of the *process* of the creation of institutions. The loan would be

discussed, argued over, perhaps disputed, and would thus become part of the public realm of discourse, shaping other lenders' and borrowers' attitudes and choices. The important thing to study, in my view, is the process by which contract forms are crystallizing and becoming predominant.

Rationing in Credit Markets. One expects to find considerable agricultural credit in an economy with pronounced seasonality in crop production. Small farmers who have little accumulated wealth need to finance their consumption and occasional hired labor. Credit should smooth incomes dependent on variable weather and volatile prices. This indeed appears to be the case in eastern Gezira. It is somewhat surprising, then, to find so little informal credit in the village of Bireka in western Sudan.

There are three possible explanations for this fact of limited borrowing. The first is that borrowing may be restricted because of imperfect information problems similar to those discussed earlier. If there were excess demand for loans, the terms of loans would not change, because with changes in terms the quality of borrowers might change, or the incentives for borrowers to repay might change.³² Then the return to the lender might be lower than before the change in repayment terms. Thus many borrowers would not be able to borrow as much as they wanted at the interest rates offered in the market, and many potential borrowers might be completely rationed.

The second explanation is that the opportunity cost of risking funds in the local loan market is high because higher-level credit markets are characterized by high interest rates and rationing. Suppliers of credit may be rationed. Any empirical analysis must then address the national credit market and how financial capital is channeled to and from rural areas.

The third explanation is simply that demand is very low; farmers do not choose to borrow given existing terms.

How might these three possible explanations be distinguished? One way would be to look at how the participants themselves explained the low level of borrowing. Rhetoric about distrust, for instance, did serve as the most common explanation for the absence of loans. Potential lenders were believed not to trust anyone who would come to ask for a loan; requesting a loan is tantamount to an admission of inability or unwillingness to repay. The rhetoric is somewhat surprising in a village of neighbors who have known and transacted with each other over long periods of time. Surely not every farmer was to be distrusted? Local discourse also had it that merchants and rich people had no money to lend. Even a casual observer, however, would have difficulty defending this as a primary explanation of the low volume of credit. For instance, many poor families in the village of Um Showa, near Bireka, maintained that there was no money available for lending. Yet there were 16 current or returned migrants to Iraq, Libya, and the Gulf States in the 28 wealthier households of the village. The remittances and earnings of these migrants overwhelmed any potential income earned by the other villagers and could easily have been lent out. Finally, many people explained that there was no lending because in fact no one needed to borrow; the people of the area were relatively well-off, these informants said, and could rely on their own capital or work as wage laborers if they needed cash. Village rhetoric, then, encompassed all three explanations.

A more satisfying approach would be to estimate a structural model of the informal credit market, deriving the parameters of the supply and demand function. Ideally one

would want to distinguish the different influences on supply and demand—opportunity costs, costs of potential defaults as expressed in distrust, and demand.

Several recent papers have estimated structural models of this sort (concentrating on the interaction between formal and informal markets), and their methods should be used in future research on Sudanese credit markets. Bell, Srinivasan, and Udry estimate the degree of rationing in Punjab agricultural credit markets; they find that most borrowers are rationed in both the regulated cooperative sector and in the unregulated private sector.³³ Kochar estimates the rationing of borrowers in Uttar Pradesh in India and reaches an opposite conclusion, arguing that low demand is responsible for the large number of sample respondents who did not borrow from the formal sector.³⁴

Political Patronage and Credit. Richards has drawn attention to the politics of patronage and indebtedness in Sierra Leone, and a similar approach to informal credit in Sudan might yield considerable insight.³⁵ One of the fundamental problems in analyzing credit transactions in Sudan is the large number of no-interest loans. How are these to be accounted for? One likely possibility is that political power is being purchased through extending credit. The village of Bireka, for instance, was mired in conflicts along ethnic and class lines. Three ethnic groups lived in the village. Hausa migrants from Nigeria constituted the majority, mixed Arab and indigenous groups (of Nuba origins) held overt political power, and a small group of Burgo households, originally from the Chad border area, maintained a vocal opposition. These groups also divided along class lines, and alliances shifted according to situations. One clear influence in political alignments, however, was the disproportionate wealth (compared with other villagers) of one Arab household head whose sons had migrated to Saudi Arabia. Many poor villagers would cite his wealth, and his potential to refuse assistance in times of need, as a factor in their decisions about political alignment on the periodic questions that would divide the villagers. Village politics were muted during 1990, the period when I was doing fieldwork, because of the uncertainty over ideology and practice emanating from Khartoum. It was certain, however, that the wealthy Arab household would use its economic influence to extend its political influence to an even greater degree when the political environment became more settled.

Concluding Comments

In this paper I have suggested, to return to my initial metaphor, that the sheil is a shill, in the sense that many academic writers have drawn large and sometimes inappropriate generalizations from an unclear and selective body of evidence in order to characterize rural Sudanese economic relations. The evidence presented here indicates that rural credit markets are far more complex and varied than the shills would have one believe. This observation is important for policy, suggesting that the urgency with which rural credit is advocated (because small farmers are being “ruthlessly exploited”) leads to hurried, expensive, overextended, and ultimately ill-conceived credit programs that amount to little more than one-time subsidies to select groups of farmers—those who are most able to take advantage of the subsidies as a result of wealth or political connections.³⁶ The implication of this paper’s criticism of the conventional wisdom about sheil is that credit programs should be small-scale and locally designed, and should emphasize local participation in determining the institutional features of formal lending. Such an

approach is labor intensive, to be sure, but unless steps are taken in that direction, development banks and donor agencies are sure to continue to “undermine rural development with cheap credit.”³⁷

NOTES

1. *Webster's Third New International Dictionary*, s. v. “shill.”
2. Sometimes also transliterated as *shayl* and *shail*.
3. To my knowledge there are no studies of credit in southern Sudan, and to that extent this paper deals only with northern Sudan—for convenience, however, I continue to omit the “northern” modifier.
4. A. B. Zahlan, ed., *The Agricultural Sector of Sudan: Policy and Systems Studies* (London: Ithaca Press, 1986).
5. Gaafar Bashir Mohammed, “Traditional Smallholder Rainfed Crop Production,” in Zahlan, *Agricultural Sector of Sudan*, p. 120.
6. Ahmed Humeida Ahmed Ali, “Finance and Credit,” in Zahlan, *Agricultural Sector of Sudan*, p. 343.
7. *Ibid.*, p. 344.
8. *Ibid.*, p. 355.
9. Babiker I. Babiker, “The Marketing System,” in Zahlan, *Agricultural Sector of Sudan*, p. 373.
10. Abdalla Adam Handouk, Ibrahim Beshir, and Abu Al Gasim Amir Abudiek, “Agricultural Credit for Small Farmers in Al Nahud Area” (Ministry of Finance and Economy of Kordofan, Sudan, January 1985).
11. El Awad Awad el Seed Ahmed, “Traditional Agriculture in the Northern District of South Kordofan Province,” in *Socio-Economic Change in the Sudan*, ed. Mohamed Hashim Awad (Khartoum: Graduate College Publication, University of Khartoum, 1983), pp. 39–66.
12. The origin of scholarly writing about sheil appears to have been an article by Martin W. Wilmington (based on unpublished work by Daud Abdel Latif), who explained high interest rates (without presenting any quantitative data) in the irrigated sector of northern Sudan as a return to risk and services. El Haj Bilal Omer also discusses credit in northern Sudan and suggests a distinction between *rammiya*, where the sum to be repaid is the grain equivalent, at postharvest market prices, of the cash value of the forwarded goods (or cash); and *garoora*, the uncomplicated forward sale of a given amount of produce. He does not give, however, evidence of rates, amounts, or forms of contracts. See Martin W. Wilmington, “Aspects of Money-lending in Northern Sudan,” *Middle East Journal* 9 (Spring 1955): 139–46; and El Haj Bilal Omer, *The Danagla Traders of Northern Sudan* (London: Ithaca Press, 1985).
13. Farah Hassan Adam and William Andrea Apaya, “Agricultural Credit in the Gezira,” *Sudan Notes and Records* 54 (1973): 104–15.
14. *Ibid.*, p. 104.
15. Saad El Medani, “Interest Rates in the Informal Credit Markets of Underdeveloped Rural Areas: The Case of the ‘Shail’ Credit in the Sudan Gezira Scheme” (Research Bulletin no. 32, Department of Rural Economics, Faculty of Agriculture, University of Khartoum, Sudan, 1983).
16. *Ibid.*, p. 12.
17. *Ibid.*, p. 15.
18. Samir Taha Saleem, “On the Determination of Interest Rates in Rural Credit Markets: A Case Study from the Sudan,” *Cambridge Journal of Economics* 11 (June 1987): 165–72.
19. Mekki El Shibly, “Monetisation, Financial Intermediation, and Self-financed Growth in the Sudan” (Development Studies Research Center Monograph no. 18, University of Khartoum, 1984), p. 35.
20. Saleem, in “On the Determination of Interest Rates,” p. 116, uses compounding to derive equivalent monthly interest rates. These compounded rates are then less than the simple monthly interest rate derived from dividing the repayment by the loan duration. The method is reasonable for purposes of comparing the implicit rates, but it still leaves unanswered the question of how repayment is negotiated if repayment does not take place at the prespecified time, whether by simple or compound interest, or by some more complex formula.
21. Technoserve, “KORAG Credit Component Baseline Study” (Technoserve, El Obeid, Sudan, 1987, Mimeographed).

22. Dennis Tully, *Culture and Context in Sudan: The Process of Market Incorporation in Dar Masalit* (Albany: State University of New York Press, 1988), p. 219.

23. A total of 709 families from 31 villages were randomly selected from the poorer 60 percent of the approximately 12,000 families living in the area. Community development workers who lived in the villages questioned the families as to the extent, volume, and sources of borrowing during the agricultural season just ended (December 1985). Information about livestock ownership and sales, seasonal migration patterns, and off-season employment was also collected.

24. For a report on the severe entitlements crisis that affected the region see Leslie Gray and Michael Kevane, "For Whom Is the Rural Economy Resilient? Initial Effects of Drought in Western Sudan," *Development and Change* 24 (January 1993): 159–76.

25. One wealthy household did negotiate a large loan with the Agricultural Bank of Sudan (ABS) for the purchase of a large existing well and pumpset along the seasonal stream that was being sold by a neighboring merchant.

26. The collaborator on the survey was Leslie Gray.

27. Leslie Gray again collaborated on the survey.

28. Several papers show how collateral can be used to mitigate adverse selection and moral hazard problems. The reasoning is straightforward; the risk of losing the collateral induces the borrowers to be more "careful" when using the borrowed funds. When borrowers are of different types, contracts with different levels of collateral induce borrowers to select contracts that "reveal" their type. See Yuk-Shee Chan and Anjan V. Thakor, "Collateral and Competitive Equilibria with Moral Hazard and Private Information," *Journal of Finance* 42 (June 1987): 345–63; and Helmut Bester, "Screening vs. Rationing in Credit Markets with Imperfect Information," *American Economic Review* 75 (September 1985): 850–55.

29. A dynamic contract is one that commits either party to some action in the future, conditional on some observable and verifiable event. In other words, both the obligation to fulfill the commitment and the actual fulfillment are enforceable. If they were not, then either party could just renege whenever that was more to their interest. Such a dynamic contract might be better than a sequence of short-term contracts because it may incorporate an "incentive effect of termination" that resolves the moral hazard problem where the borrower is able to divert funds from intended uses. If a borrower knows that diverting funds will raise the possibility that no borrowing will be possible in the future, he or she will be less likely to divert funds. See Joseph Stiglitz and Andrew Weiss, "Incentive Effects of Terminations: Applications to the Credit and Labor Markets," *American Economic Review* 73 (December 1983): 912–27; David Scharfstein and Patrick Bolton, "A Theory of Predation Based on Agency Problems in Financial Contracting," *American Economic Review* 80 (March 1990): 93–106; and Martin Hellwig, "A Model of Borrowing and Lending with Bankruptcy," *Econometrica* 45 (November 1977): 1879–1906.

30. Joseph Stiglitz and Karla Hoff, "Introduction: Imperfect Information and Rural Credit Markets—Puzzles and Policy Perspectives," *World Bank Economic Review* 4, no.3 (1990): 235–50.

31. Udry rejects the hypothesis that lenders and borrowers stick to rigid repayment terms that do not embody some sharing of risk. His estimates of a structural model using data from a sample of northern Nigerian farmers shows that the terms of repayment were state-contingent. He has suggested that in northern Nigeria this informality is possible because there are well-understood shared norms about state-contingent repayments and there is a "free flow" of information within the village. I am wary of the assumption of free-flowing information. While certainly the transactions between individuals are the subject of discussion, such discussions consist, more often than not, of hearsay, innuendo, and wishful thinking. Simple agreements between individuals in Bireka were often the subject of heated disputes and renegotiations. On several occasions I witnessed exchanges between workers who had been advanced money to complete work and their employers. The employers argued that the worker had failed to accomplish the task and should repay the money. The workers argued that the task had been vaguely specified. The weekly distributions of rationed goods were periodically the scenes of loud arguments as different villagers claimed to have been cheated, deceived, tricked, kept in the dark, overlooked, misunderstood, not returned change past due, not given rations past due, and so on. In any case, the contracts analyzed by Udry, while state-contingent, were institutionalized in northern Nigeria. They are not found in the state of flux I suggest exists in many parts of Sudan. See Christopher Udry, "Risk, Insurance, and Default in a Rural Credit Market: An Empirical Investigation in Northern Nigeria" (Department of Economics, Northwestern University, 1991, Mimeographed).

32. See Michael R. Carter, "Equilibrium Credit Rationing of Small Farm Agriculture," *Journal of Development Economics* 28 (1988): 83–103.

33. Clive Bell, T. N. Srinivasan, and Christopher Udry, "Segmentation, Rationing, and Spillover in Credit Markets: The Case of Rural Punjab" (Department of Economics, Yale University, 1990, Mimeographed).

34. Anjini Kochar, "An Empirical Investigation of Rationing Constraints in Rural Credit Markets in India" (Department of Economics, Stanford University, 1992, Mimeographed).

35. Paul Richards, *Coping with Hunger: Hazard and Experiment in an African Rice-farming System* (London: Allen & Unwin, 1986), pp. 126–29.

36. For some of the shortcomings of current credit programs in Sudan see Paul van Dooren, "Partnership Contracts as an Alternative to Falling Agricultural Credit? Sudan's Rural Credit Experience," *Africa Insight* 20, no. 2 (1990): 87–92.

37. Douglas Graham, J. D. von Pischke, and Dale Adams, *Undermining Rural Development with Cheap Credit* (Boulder, CO: Westview, 1984).