

IMPACT OF PUBLIC POLICIES ON RURAL INFORMAL CREDIT MARKETS IN THE PHILIPPINES: SYNTHESIS OF SURVEY RESULTS AND LESSONS FOR POLICY*

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1. INTRODUCTION

A major feature of the financial market of most developing countries is the predominance of the informal financial sector. Also referred to as the noninstitutional or unorganized financial market, the informal financial market covers all financial activities not within the purview of formal regulations imposed on the formal sector in respect to capital, reserve and liquidity requirements, ceiling on lending and deposit rates, mandatory credit targets, and audit and reporting requirements. A heterogeneous sector composed of moneylenders, landlords, traders, input traders, etc., its main distinctive characteristics are ease of entry and exit, informality of transactions and small loan size. Although there are no accurate estimates of its size, intercountry comparative estimates indicate a rough figure of three-fourths the size of the formal financial market (Wai 1980).

The importance of the rural informal financial market cannot be overemphasized. It performs the vital function of channelling credit to small and poor borrowers outside the reach of the formal financial system. Similarly, it helps in the mobilization of rural savings through various innovative mechanisms and arrangements exemplified by indigenous rotating savings and credit associations (ROSCAs) and credit unions.

The importance attached to the functions of the informal financial market, however, has been largely overlooked by the widespread view that informal credit sources are exploitative. As a result, financial market policies have been geared towards minimizing, if not totally eliminating, the informal lenders via a host of policies and measures aimed at increasing institutional credit flows and/or providing competition. The extent to which financial

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markets and other macroeconomic and sectoral policies impinge on the operations of rural informal credit markets, however, remains little understood.

This paper addresses the above concern. Using results from various surveys, we examine how changes in rural financial markets and agricultural sector policies contributed in shaping the structure and operations of rural informal credit markets in the Philippines. It is to be emphasized that, because of the nature of the data, the results should be interpreted as indications of directions rather than as strict causal relationships.

The paper is divided into five sections. Section 2 outlines the conceptual framework of the review. Section 3 discusses the developments in the macroeconomic and agricultural sector policy environment. The fourth section examines the changes over time in the structure and operations of rural informal credit markets (RICMs) in the Philippines based on results of various farm and national level surveys. Finally, section 5 draws lessons for policy.

2. CONCEPTUAL FRAMEWORK

In order to understand how public policy impacts on the informal financial market it is important to identify the unique and fundamental differences between the informal financial market and the formal system. These differences are: (1) the absence of formal regulatory controls on the former's operations; and (2) the pervasiveness of interlocking relationships between informal credit market transactions and other transactions in other factor and product markets.¹ Because of this latter characteristic, the impact of public policy on other markets to which the credit market is interlinked generates spillover effects that importantly shape the qualitative and quantitative dimensions of its development.

There are two ways by which public policies affect the performance of the informal financial market. The first is through monetary and financial market policies aimed at influencing the performance of the financial market in general. The impact of these policies is transmitted through the financial system as banks and other financial intermediaries respond through portfolio adjustment to changes in the relative rates of returns and risk of various financial assets and instruments. The other channel is via the spillover effects of policies on markets through which the credit market is interlinked. These impacts are transmitted through a number of channels, viz., through changes in underlying production relations, production technology, and changes in material or physical attributes (e.g., changes in the size and

1. For empirical studies on the Philippines, see TBAC (1981), Quiñones (1982), Serrano (1983), Floro (1985), Geron (1989), Bautista (1989, 1990) and Esguerra (1990).

spatial distribution of production units). Figure 1 illustrates these interrelationships.

For a clearer picture of these interrelationships, consider the case of the impact of the so-called meso variables (markets and infrastructure). As a concrete example, consider the case of a land reform program which alters the underlying production relations and the collateral value of land. In a pre-land reform situation in which landlords are the principal source of informal finance, a land reform program may result in a significant reduction in the supply of informal credit since the incentive effect of credit in eliciting optimal effort levels under a tenancy contract is severed.² On the other hand, to the extent that land reform implementation confers full ownership rights on farmer-cultivators, an increased demand for formal credit with potential spillover effects on the informal credit market may result. Similarly a yield-increasing technical change associated with irrigation, modern varieties and purchased inputs clearly increases the demand for harvest labor and thus exacerbates the seasonality of labor demand. Given constraints in family labor supply, an induced increase in credit demand to meet short-term peak season labor requirements may be observed.

In the case of output price, the impact depends on whether or not the credit contract involves interlinked transactions. Geron (1989) and Fabella (1989) analyzed the effect of output price in an interlinked credit arrangement. Under a monopolistic arrangement in which a trader-lender can set interest rate and output price in an interlinked contract, it is shown that an increase in the buying price increases the volume of borrowing or, conversely, the volume of lending through its effect on income, assuming no constraints on the lender's supply of funds.

In the case of rural infrastructure, the impact on financial markets is indirect. Empirical analysis on the subject is rare not only because of the methodological difficulty in attributing the impact on specific variables but also in obtaining a reliable index of interest rate in informal credit markets or quantifying the volume of aggregate informal lending in a given area. Of the few studies on this subject, Ahmed and Hossain (1990) analyzed the effect of infrastructure on rural savings and investment. Ahmed and Hossain found that the effect of rural infrastructure is indirect, operating as it does through its effect on income. In the case of rural roads, an analysis by Garcia (1984) showed that the construction of rural roads significantly increased household income and employment opportunities. Intuitively, since an improvement in rural infrastructure (e.g., roads, irrigation) reduces transactions costs, thereby increasing the efficiency of market trades both in goods and financial markets, it is expected that the volume of lending will substantially

2. The incentive role of credit in interlinked transactions is expounded in Braverman and Stiglitz (1982) and Mitra (1983).

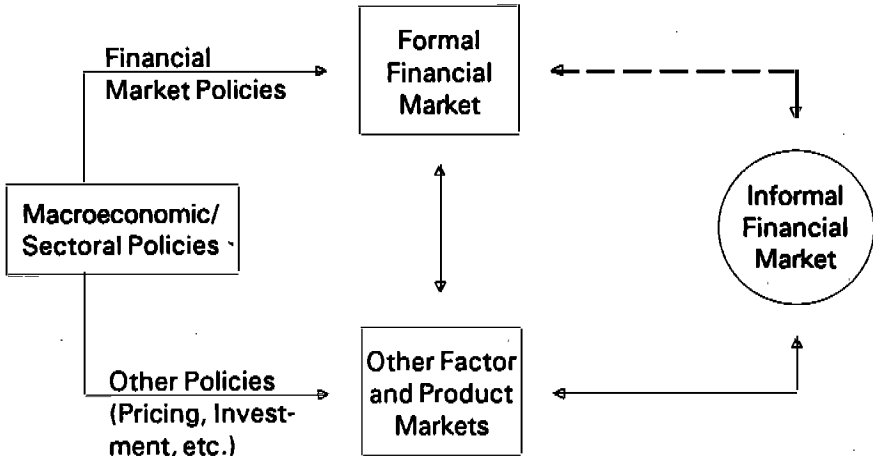


Figure 1. Interrelationship Between Public Policy and Informal Financial Markets

increase. The impact on the informal credit market, however, is, a priori, ambiguous. To the extent that the improvement and availability of infrastructure leads to the entry of more banking units that can *effectively* provide competition to informal sources, then the volume of lending and interest rates from the informal credit market may decline. On the other hand, if new bank entrants do not possess comparative advantage in lending and instead serve as a source of additional liquidity to informal credit sources, i.e., in the form of trade capital as in the case of trader lenders, an increase in the volume of lending from the informal credit market may result. Depending on the initial conditions in the various markets, their interactions, and the underlying microeconomic behavior of agents in specific transactions the impact of meso variables is, a priori, difficult to predict.

In the case of financial market policies the impact on informal credit markets depends on whether informal financial markets are relatively well-integrated with the formal financial system. If a well-developed and functioning financial market exists, expansionary monetary policies will, other things the same, cause interest rates to fall. If the informal financial market is well-integrated with the formal financial market, the decline in interest rate in the formal system should affect interest rates in the informal system as households and firms respond to the relative cost of capital between the two sectors.

The above framework assumes the existence of well-developed financial markets and abstracts from political economy considerations that normally underlie public policy making. For most developing countries this stylized version of a well-functioning financial market is more of the

exception rather than the rule. A pervasive feature of financial and other factor markets in developing countries is their high degree of fragmentation. This fragmentation is such that households not only have limited access to but face different rates of return on land, labor and capital. The situation is further compounded by various policy distortions on specific markets in the rural economy. Under this setting, political economy considerations of cheap credit or interventions in the rural financial market through supply-lending financial market policies have been widely advocated and adopted. Underlying these interventions are views widely held by policymakers on the role of finance in development. Among these is the perception that credit is a prerequisite for the adoption of the new package of agricultural technology. Similarly, the provision of cheap credit is seen as a corrective measure or second-best policy to ameliorate policy biases against agriculture. Finally, the provision of cheap credit is envisioned to supplant and/or provide competition to informal credit sources that are viewed as exploitative.

Since the target beneficiaries are usually perceived as poor credit risks by formal financial institutions, governments have to rely either on direct and/or indirect methods of allocating credit to these beneficiaries. As various country experiences show, governments have either channelled financial resources directly via the bureaucracy itself or used the facilities of the financial system. In the case of the former, specialized agricultural development banks and/or line agencies are usually created to operate loan programs for target beneficiaries. On the other hand, to induce banks to lend to preferred sectors, governments implement various selective credit policies and fiscal incentives such as differential rediscount and interest rates, and/or enact specific banking regulations. The latter include a loan quota to specific sectors, credit ceiling and deposit retention schemes, as in the case of the Philippines. The net effects of these policies on rural financial market development in general and on the informal credit market in particular and their implications for rural financial market reforms are discussed in the next sections.

3. AGRICULTURAL SECTOR AND FINANCIAL MARKET DEVELOPMENTS

In the previous section, we hypothesized that although the informal financial market is outside the purview of the formal regulatory system, macroeconomic and sectoral policies exert important influences on its development. In this section, we review and identify some of these specific policies from 1970 to 1990 which affected the development of the informal credit market in the Philippines. Tables 1 and 2 present a listing of these policies.

1970s. During the period 1970-90, both the financial market and the agricultural sector policy environment underwent significant changes in

Table 1
FINANCIAL MARKET POLICIES, 1970-80

Period	Policy
1970s	<p>"Supply-led" Finance</p> <p>Interest rate</p> <p>Administratively determined ceiling on deposit and loan rates. For loans, ceiling was 12% for supervised credit and 14% for nonsupervised credit. For deposits, 6% for savings and 6.5 - 8% for time.</p> <p>Rediscounting/Special Time Deposits (STDs)</p> <p>Preferential rediscounting for agricultural activities both in terms of loan value and rate. Rediscount rate for agricultural loans was set at 1% p.a. for supervised credit and 5% for nonsupervised credit.</p> <p>Low cost funds for financial institutions through STDs at 3% p.a.</p> <p>Loan Quota</p> <p>A policy mandating banks to invest 25% of their net loanable funds to the agricultural sector, of which 10% is for agrarian reform beneficiaries and 15% agricultural in general.</p> <p>Deposit Retention</p> <p>At least 75% of total deposits accumulated by branches, agencies, extension offices and/or head offices of banks shall be invested in the region where the deposits were generated.</p>
1980s	<p>Financial Liberalizations</p> <ul style="list-style-type: none"> o Market determined interest rates on deposits and loan rates. o Uniform rediscount rate. Rediscount rate was linked to the Manila Reference Rate (MRR). o Central Bank program for selective rehabilitation of rural banks. o Phasing out of developmental banking function of the Central Bank - Transfer of various special lending programs such as the Integrated Rural Financing (IRF) and the Agricultural Loan Fund to the Land Bank of the Philippines (LBP). o Termination of direct lending programs by nonfinancial government institutions and the consolidation of agricultural lending funds into the Comprehensive Agricultural Loan Fund (CALF). o Expansion of guarantee programs under the CALF facility. o Liberalized bank branching restrictions. Lifting of the required purchase by banks of low-yielding government securities.

Table 2
AGRICULTURAL SECTOR POLICIES, 1970-80

Period	Policy
1970s	<p>Agricultural Sector Specific Intervention</p> <p>Land Reform Program</p> <p style="padding-left: 2em;">Tenurial change in rice and corn lands from share tenancy to lease fixed rent/household and conversion of lessees into amortizing owners.</p> <p>Public Investment</p> <p style="padding-left: 2em;">Public investment in irrigation infrastructure rural roads, agricultural research and extension.</p> <p>Marketing/Distribution</p> <p style="padding-left: 2em;">Intervention in marketing, trading and distribution of agricultural inputs and commodities via marketing parastatals in fertilizer and pesticide (Fertilizer and Pesticide Authority), sugar (Philippine Sugar Commission), coconut (Philippine Coconut Authority), and rice and corn (National Food Authority)</p> <p>Pricing</p> <p style="padding-left: 2em;">Price ceilings on rice and corn, export taxes/levies on copra, sugar, and fertilizer subsidy</p>
1980s	<p>Agricultural Policy Reforms</p> <ul style="list-style-type: none"> o lifting of the copra export ban and the export tax on coconut oil o abolition of monopolistic arrangements in sugar and coconut trading o liberalization of fertilizer importation and distribution o liberalization of importation in wheat, flour, wheat products and animal feeds o withdrawal of the National Food Authority (NFA) from trading in wheat, flour and feed ingredients.

orientation. In the 1970s government policy was characterized by pervasive direct and indirect intervention in the product, input and overall incentive structure of the economy. Financial market policies followed the supply-led approach characterized by liberal provision of credit through interest rate subsidy, loan quota, preferential rediscounting and a host of other selective credit and complementary fiscal incentives to financial institutions lending to agriculture.

In the agricultural sector, government extensively intervened through pricing and distribution policies via the establishment of marketing parastatals, public investment and agricultural research and extension. Additionally, a land reform program on rice and corn lands was implemented along with the provision of a package of yield-increasing rice technology based on modern rice varieties, chemical fertilizer and irrigation.

1980s. Those policies continued to be implemented well into the early 1980s until the economic crisis in 1983 and the subsequent political change in government in 1986 forced a reorientation of economic policies towards a more "market friendly" approach. In sharp contrast to the liberal financial market policies and pervasive intervention in agriculture that characterized the 1970s, the 1980s saw the adoption and implementation of policy reforms aimed at enhancing the efficiency and productivity of the economy through the removal of distortionary macroeconomic and sectoral policies. These reforms were engendered by a number of considerations.

In agriculture, developments in the international market and the associated welfare and efficiency losses to the economy created strong pressure for change. Although pervasive direct and indirect interventions by government in the agricultural sector created an incentive structure that is significantly biased against agriculture, the sector posted significant growth for the most part of the 1970s. This was largely due to the impact of investment in rural infrastructure, principally irrigation and technological change. Since the mid-1960s increases in yield have accounted for about 80 percent of total agricultural production growth. Whereas the cultivated area per farm worker declined by an annual average of 2.5 percent during the period, yield grew by an annual average of about 5 percent, enabling output per worker to grow by about 2 percent annually (David *et al.* 1984). During the 1980s this productivity growth tapered off significantly especially in the food sector. This was due to a number of factors. By the mid-1980s, about 85 percent of the total rice area was planted to modern rice varieties, and nearly 65 percent of this was irrigated. Fertilizer use on rice also rose from 8 kg NPK per hectare in the mid-1960s to 40 kg NPK per hectare in the mid-1980s (Balisacan 1991). Government investment in agriculture also significantly declined, resulting in poor maintenance and a consequent deterioration in rural infrastructure. More importantly, with the change in the world economic environment in the 1980s, the impact of the various macroeconomic and sectoral policies biased against agriculture was increasingly felt as Philippine agriculture began to lose its international competitiveness even in sectors in which it traditionally had comparative advantage.

These developments created strong pressure for the adoption of major policy reforms. Following the adoption of the recommended policy reform measures drafted by a group of economists based at the University of the Philippines in Los Baños, the Philippine government in 1986 moved

quickly to reduce distortions against agriculture and to remove institutional constraints in the sector. Major actions included: (1) the lifting of the export ban on copra; (2) the abolition of monopolies and monopolistic structures in sugar, coconut and, later, in fertilizer; (3) the liberalization of urea and potash imports and distribution; (4) the abolition of export taxes except those on logs; and (5) the withdrawal of the National Food Authority from trading in wheat, flour, and feed ingredients, among others.

In the financial market, initial policy reforms came much early on as part of the policy conditionalities tacked on to the various structural adjustment loans. In 1981 initial reforms in the financial market were started to enhance the efficiency of the financial system through the elimination of regulated interest rates and other distortionary policies. Ceilings on interest rates on deposits were lifted while rediscount rates for agricultural papers were adjusted from 1 to 3 percent per annum. Reserve requirements were also programmed for reduction but got deferred as the country experienced its worst postwar political crisis in 1983.

In 1986 rural financial market policy took on a new orientation. Underlying the new thrust in rural financial market policy was the Philippine experience in cheap credit policy in the 1970s. The pervasive implementation of various interventions in the financial market led to mounting loan arrearages, huge financial burdens and allocative inefficiency in the economy. The convenient access to cheap credit by rural banks inhibited real financial intermediation in the rural economy. Savings mobilization was neglected as rural banks obtained more than half of their loanable funds from special time deposits and rediscounts with the Central Bank (Llanto and Neri 1985). Rural banks, in effect, became mere conduits of government credits, performing little banking functions and savings mobilization. In the same manner, since interest rates subsidies were largely captured by formal lenders and bigger farmers this worsened rural income distribution.³

To strengthen the rural financial system, the Central Bank implemented a selective financial rehabilitation of the rural banking system aimed at enabling rural banks with the problem of arrearages to resume normal banking operations. The program contained a host of measures and incentive mechanisms designed to assist rural banks to liquidate their arrearages and at the same time strengthen their financial position.⁴ To rationalize the agricultural credit system, the government, through the

3. For a discussion of the income distribution of credit subsidy in the Philippines, see Esguerra (1981).

4. For a discussion of the mechanics of the program, see Dominguez (1988). The 1987 financial rehabilitation package for rural banks has been lately complemented by a new financial enhancement program called Countryside Financial Institution Enhancement Program. The program aims to enhance the overall financial capability and stability of rural banks by encouraging existing or new stockholders to infuse fresh equity through three alternative modules made available to participating rural banks.

Agricultural Credit Policy Council (ACPC) undertook the consolidation of funds previously earmarked for agricultural credit programs into a pool of funds called the Comprehensive Agricultural Loan Fund (CALF). The policy orientation has two major features, viz., the termination of all direct lending programs administered by nonbank institutions and greater emphasis on the market mechanism in the allocation and pricing of credit resources. As a concrete expression of the new policy reorientation, publicly-backed agricultural credit guarantee schemes were promoted and supported through capital allocation from the CALF portfolio. One of the bases of the policy orientation was the view that the key to integrating the rural financial market is financial innovation through the reduction of lending risk and administrative cost inherent in agricultural lending. Further, since the decision making process under guarantee programs is left to the bank and the borrower, guarantee mechanisms are perceived to have only minimal distortions.

Initially the CALF was operated as a guarantee fund through three existing guarantee institutions, viz., Quedan Guarantee Fund Board (QGFB), Guarantee Fund for Small and Medium Enterprises (GFSME), and Philippine Crop Insurance Corporation (PCIC).⁵ By 1988, its operations had been expanded to other activities, viz., provision of liquidity financing through the Land Bank of the Philippines' rediscounting window, rural financing through viable nongovernmental organizations, and the provision of technical assistance and funding support for the replication of innovative financial intermediation schemes such as the Grameen Bank experience of Bangladesh.

As the next section illustrates the changing policy environment exerted direct and indirect effects in shaping the qualitative and quantitative dimensions of informal credit markets in the Philippines.

4. IMPACT OF ECONOMIC POLICIES ON INFORMAL CREDIT MARKETS

Although a direct estimation of the impact of public policy on the informal credit market may not be feasible given the data constraint, an indication of the impact of policies can be gleaned by looking at the observed changes over time in the structure and operations of rural informal credit markets. These changes may be either quantitative as reflected in the size and levels of interest rates or qualitative as reflected in the changes in various aspects of informal credit market operations.

5. The operation of the CALF credit guarantee program was expanded in 1989 to include the Bagong Pagkain ng Bayan (BPnB). The Quedan Guarantee Fund Board operates the quedan system of loan guarantee based on warehouse receipts or quedans of storable commodities. GFSME provides credit guarantee and other support to small and medium enterprises. PCIC provides credit guarantee to loans of no more than P150,000 to small farmers owning no more than seven hectares. Finally the BPnB operates a credit guarantee scheme for loans extended to local government units.

Quantitative Changes in Rural Informal Credit Markets

Size of the informal credit market. Empirical evidence from various Asian countries indicate that changes in policy environment impinge on the size of the informal credit market (ADB 1990). In the Philippines, evidence from various surveys from the 1950s to the 1980s revealed temporal changes in the size of the rural informal credit market both in terms of the proportion of borrowing households from informal credit sources and as a proportion to total loan transactions. During the 1950s and the 1960s, 75 to 90 percent of rural households borrowed from informal sources. By the 1970s, various survey results had shown an unmistakable decline in the importance of informal credit sources. This decline was reversed in the 1980s, reverting to the levels of the 1960s (Table 3).

The observed trends are consistent with the hypothesized behavior of the informal credit market in response to the changing macroeconomic policy environment. The predominance of informal sources of finance during the 1950s and 1960s can be attributed to the largely agrarian nature of the economy and to the nascent stage of the Philippine financial system. Except for major urban centers, bank branches outside the capital city remained limited. As of 1988, about 44 percent of the total municipalities and cities in the country were without banks. Density ratios across regions also reveal the skewed distribution of banks. The National Capitol Region was "overbanked" with about 65 banks servicing each municipality. The rest of the country is "underbanked" in terms of inadequate or no banking facilities at all in some municipalities (Chan 1988).

On the other hand, the significant decline in the importance of informal credit sources during the 1970s coincided with two important changes in policy environment during the period. First, the nationwide land reform implementation in rice and corn lands in 1972 altered the then existing production relationship in land tenure from share-tenancy to fixed rent or leasehold. This change altered the underlying incentive structure embodied in a share tenancy contract from that of a land-labor-credit link contract to one in which the risk is totally borne by the lessee under a fixed rent contract. Since the "incentive effect" of credit was severed, the volume of informal credit significantly declined as landlords became the major source of finance in the rural economy. Second, as a complementary measure to the land reform program, the government, during the period, implemented a liberal credit policy aimed at directing the flow of institutional credit to agriculture. As a result, institutional credit flows to agriculture increased from P3.2 billion in 1973 to P9.0 billion in real terms in 1981—a result of both liberal credit and bank branching policy. During the period, the number of rural banks grew by 7.3 percent per annum or an equivalent of 56 new rural banks per year.

The expansion of formal credit in the 1970s proved rather temporary. First, mounting loan arrearages in the late 1970s disqualified an increasing

Table 3
AVERAGE RELATIVE PROPORTION OF BORROWERS
BORROWING FROM INFORMAL CREDIT MARKET AND
PROPORTION OF INFORMAL LOANS TO TOTAL
LOAN TRANSACTIONS
(Various Surveys)^a

Period	Percent of borrowers from informal credit sources	Percent of informal loans to total loan transactions
1950s	74.0	87.6
1960s	88.1	91.8
1970s	75.6	70.0
1980s	82.6	85.9

a. See Appendix Tables 1 and 2 for the surveys considered. Although the numerical results are sensitive to specific surveys, the pattern in general reflects the observed trend.

number of rural banks from the rediscounting facility of the Central Bank which has been the main source of cheap credit to small farmers. As rural banks rationed credit to only the most creditworthy borrowers, disqualified borrowers shifted back to the informal credit market (TBAC 1986). Second, the banking reforms initiated in 1981 led to upward adjustments in both interest on deposits, loans and rediscounts plus the gradual elimination of various subsidies and in the fiscal incentives enjoyed by rural banks. Since most rural banks had a low deposit base to effectively sustain their lending, farm credit took a dramatic plunge. This situation was further compounded by the political crisis in 1983 when the Central Bank, to stem the flight of capital, had to exercise a very tight monetary policy that sent interest rates soaring to 40 percent. This strategy became a virtual attack on the financial system as banks were besieged with pretermination of time deposits by depositors seeking to shift their portfolio into high-yielding Central Bank bills. The banking system virtually stopped lending to agriculture as the high-yielding central bank instrument proved too tempting and secure. As a result outstanding loans to agriculture in nominal terms by commercial banks fell by 35.9 percent in 1984 and by 0.3 percent in 1985 (Montes 1987). This contraction in the formal credit system was apparently filled in by informal credit sources.

It is to be noted, however, that while the informal credit market expands or contracts in response to changes in policy environment, the extent of its response is limited to that part of it which is "reactive," i.e., the part which

responds to controls over and deficiencies in the formal system. This distinction made by Chandavarkar is important since there is a limit beyond which expansion in the formal system can effectively substitute for informal credit. This limit is such that, because of the increasing per unit transactions cost of administering small loans or of financial innovations, the formal system is unlikely to serve these loan sizes or clients. Thus, formal and informal loans may be substitutes at some range of loan size but not at smaller loan sizes.

Interest rates in informal credit markets. Two interrelated features of informal credit markets are the high levels and degree of variability of interest rates. A large number of empirical studies have documented interest rates ranging from as high as 200 percent to as low as zero percent.⁶ This diversity is a common and expected feature of informal credit markets owing to differences among lenders on their cost structure, risk bearing attitude and portfolio, among others.

Although there is no conclusive empirical evidence indicating a systematic decline over time in the levels of interest rates on informal loans, some evidence from various sources seems to point towards this direction (Table 4). A number of reasons may account for such trend. First, the development of the financial system, especially the establishment of more rural banks and branches of private banks, may have provided more competition to informal sources of finance. The TBAC survey in 1981, for instance, noted that average interest rate in Bulacan was lowest among the three provinces included in the survey due to the presence of more banking units. Similar results were observed in India. Iqbal's (1988) study found evidence of a reduction in moneylender monopoly power as a result of increased competition from formal lending agencies. Second, the decline in interest rate may be attributed to a general improvement in economic conditions in the rural economy. Technological change and an expansion in irrigation and infrastructure that contribute to lower transactions costs and risk exert downward trends in interest rates. Floro (1986) found that interest rates on informal loans in the more developed areas tend to be much lower than those in economically less developed areas. Similarly, Iqbal found that farmers residing in areas characterized by the use of the Green Revolution technology could avail themselves of a lower moneylender interest rate. Although these results may not be conclusive at this point in time, they suggest that rural informal credit market conditions are responsive to the economic environment, contrary to the perceived wisdom. Thus, a key to financial market development may lie in the adoption of appropriate nonfinancial market policies that lower the transactions costs of trades in the rural economy.

6. Cf. footnots 1.

Table 4
COMPARATIVE LEVELS OF INTEREST RATES ON
INFORMAL LOANS
(Various Surveys)

Study/Reference period	Annual interest rate (%)
Gapud (1957/58)	126.8
Sacay (1957/58)	82.0
TBAC (1981/82)	55.53 ^a
Geron (1986)	84.0 ^b
ACPC (1987)	56.3

a. Nominal.

b. Maximum nominal rate charged by traders.

Structure of Rural Informal Credit Markets

Apart from the impact of policy on the quantitative dimension of the informal credit market, it has been observed that changes in policy environment affect the qualitative nature of the informal credit market. Bell and Srinivasan (1985), for instance, observed that the regulation of the operations of formal credit institutions in India has led to a significant degree of market segmentation, with appreciable spillover effects on transactions in the ICM. Similar changes in the qualitative aspects of ICM that include changes in the market share of various types of lenders, in loan use, and in the collateral substitute and levels of interest rate are revealed by data from various surveys. Table 5 summarizes these qualitative changes in the RICM.

Composition of informal lenders. Evidence from various surveys revealed that while landlords were the major source of informal finance during the 1960s, traders, millers, input dealers and, in some areas, farmers themselves became the major informal creditors during the 1970s and 1980s particularly in major rice producing areas. However, in areas where neither technological change nor effective land reform was implemented, the importance of landlords as the principal source of rural credit remained.

As we noted in the previous section, land reform implementation altered if not totally severed the land-labor-credit interlinkage embodied in existing share tenancy contracts. As a result, landlords' supply of credit to their tenants contracted significantly. Simultaneously, the pervasive adop-

Table 5
OBSERVED QUALITATIVE CHANGES IN RURAL INFORMAL CREDIT MARKETS

	1950s - 1960s	1970s	1980s
Type of Lenders	Landlords Relatives & friends Private moneylenders	Traders Input dealers Millers Landlords Relatives & friends Private moneylenders	Traders Farmers Millers Input dealers Landlords Relatives & friends Private moneylenders
Loan Use	Primarily for consumption	Shift towards more productive use of loans	
Collateral Substitute	Interlinked land-labor-credit contract embodied in share - tenancy arrangement	Greater incidence of credit-product market interlinked contracts or tie in-sales between farmers & traders	Increasing importance of labor-credit interlinked contract w/ the emergence of a "two-tier" structure in agricultural labor market and land pawning contracts

tion of yield increasing technology hastened the commercialization of the rice economy as greater reliance on purchased inputs and bigger marketable surplus led to the increased roles of input dealers, millers and traders in the rural economy. With relatively easier and lower entry costs at the lower end of the market, increased competition occasioned by the entry of new traders and/or commission agents of established traders/millers led to the increased incidence of interlinked credit and product contracts.

On the other hand, the increasing importance of farmer-lenders in the rural credit market can be traced to developments in the agricultural labor market. The significant increase in productivity engendered by the new rice technology and the fixing of land rentals under land reform regulation generated a surplus for lessees (Hayami and Kikuchi 1981). As rents rose relative to wages, those with equity in land enjoyed an increase in wealth. In addition, higher land equity enhanced the farmer's ability to borrow at lower interest rates. This income effect helped push farmers to a higher position in the agricultural income ladder (Roumasset and Smith 1981). The increased income induced the substitution of hired for family labor especially in farm operations where quality shirking can be easily done by ex post inspection of the field. Coupled with the accentuation of peak season labor requirement, an induced increased demand for permanent or semiattached workers has emerged to reduce monitoring cost. Embodied in such contract, as observed in Central Luzon, is the provision of credit (Hayami and Otsuka 1989). This institutional change in labor markets explains the emerging role of farmers in informal credit transactions.

Loan use. Interrelated to the observed change in the types of lenders was the observed change in the productive use of the loan. Although the fungibility of loan use was an important issue, results from various surveys showed an unmistakable trend indicated by the shift in loan purpose from one that is essentially consumptive in nature in the 1960s to one that is production-oriented especially in rice-growing areas where the pervasive adoption of the new rice technology induced an increased demand for purchased inputs such as fertilizer and chemical insecticides. On the other hand, in areas where technological change in agriculture had not made a significant impact, the use of informal credit has remained consumptive in nature.

Collateral/collateral substitute. Unlike transactions in the formal financial system wherein the use of collateral is more the rule than the exception, the converse holds true in RICM transactions. Informal lenders, however, employ a variety of collateral substitutes. These include third party guarantee, threat of future borrowing opportunities and interlinked contracts. The latter are contracts wherein borrowers and lenders tie or bundle transactions in credit market with transaction(s) in another market(s). By interlinking transactions, informal lenders are able to exercise a greater degree of control because the possibility of discovery of dishonesty or shirking by an

agent in one transaction is made costly for him in terms of spillover effects threatening other transactions (Bardhan 1980).

As the relative importance of various informal lenders changed over time, so did the observed use of specific types of collateral substitutes especially in rice-growing areas. Tie-in sales and labor-credit interlinked contracts increasingly dominated other contractual arrangements in areas where pervasive technical change occurred and land reform implementation was widespread. The former was to assure the adequate and timely supply of palay in the light of increased entry and competition in the product market.

The increased incidence of land pawning contracts, on the other hand, is related to land rental regulations coupled with technological change in rice farming that conferred increased transaction value to the cultivation rights of land reform beneficiaries. (Nagarajan *et al.* 1990). As the supply of formal credit in the 1980s declined significantly, land pawning became a convenient instrument for facilitating credit transactions in informal credit markets.

Other Features of RICMs

Despite those observed changes, a couple of features remained largely unchanged. These are the relatively small size of informal loans and the short duration of their maturity. As documented in various major surveys, the majority of informal loans were for less than P1,000 (Table 6) and for less than six months in maturity (Table 7). These features arise from informal lenders lending out of equity. Further, since their lending is tied to their operations in other products and factor markets, lenders have to lend short to maximize the turnover of their liquid capital. This is particularly the case for traders or merchants where profits are determined not so much on the margin per se but on the volume of business, with the latter being a function of the turnover rate of their inventory.

5. CONCLUSION AND LESSONS FOR POLICY

Contrary to the common impression, the observed trends in rural informal credit markets in the Philippines revealed that financial and agricultural sector policies have had varying effects on rural credit markets. While expansionary selective credit policies during the 1970s resulted in an increased flow of formal credit to agriculture, this merely substituted for informal credit in the short-term without the concomitant lasting effect on the agricultural sector in general or on farmers' creditworthiness in particular. Inadvertently, the supply-led approach undermined the viability of the rural banking system as the availability of cheap credit from the Central Bank fostered dependence and inefficiency among participating financial institutions in government-sponsored special lending programs.

Table 6
DISTRIBUTION OF INFORMAL LOANS BY LOAN SIZE
(Various Surveys, Philippines)

Loan size classes	BCS (1960-61)	BAS (1976-78)			FIS (1981-82)	RSM (1986)	ICM (1987)
		Percent of number					
	Percent of number (n = 1,540,000)	1976 n = 63	1977 n = 62	1978 n = 56	Percent of number (n = 1,461)	Percent of number (n = 652)	Percent of number (n = 1,764)
< 1,000	99.4	82.4	87.1	82.3	62.5	69.0	71.4
1,000 - 2,000	0.5	15.2	7.7	6.8	18.5	10.6	13.0
2,001 - 5,000	0.1	2.4	2.6	9.5	14.6	13.0	8.4
5,001 - 10,000	-	-	2.6	1.4	3.6	4.9	3.8
> 10,000	-	-	-	-	0.9	2.5	3.4
All Classes	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources of data: See Appendix 1.

Table 7
DISTRIBUTION OF INFORMAL LOANS BY MATURITY
 (Various Surveys, Philippines)

Maturity	BAS (1976-78)		FIS (1981-82)		RSM (1986)		ICM (1987)	
	Percent of number	Percent of amount	Percent of number	Percent of amount	Percent of number	Percent of amount	Percent of number	Percent of amount
	(n = 144)		(n = 1,461)		(n = 528)		(n = 1,699)	
< 6 mos.	062.0		074.7	073.0	092.2	074.6	079.8	066.9
7 - 12 mos.	030.0		008.6	011.0	004.7	006.6	018.0	027.7
> 12 mos.	008.0	N.A.	016.7	016.0	003.1	018.8	002.2	005.4 ^a
Total	100.0	100.0		100.0	100.0		100.0	

a. Nueva Ecija province did not have loans with a maturity longer than 12 months.
 Sources of data: See Appendix 1.

In contrast, nonfinancial agricultural sector policies in the 1970s such as land reform and public investment in irrigation had more profound and real effects on the sector. The expansion of irrigation hastened the adoption of yield-increasing technology, resulting in productivity increases and the development of rural factor and product markets. The income effects arising from productivity increases and the fixing of land rentals under land reform regulations induced the substitution of hired for family labor especially in farm activities that can be easily monitored through ex post field inspection. As a result, an increased demand and market for permanent labor emerged. In a similar manner, the larger marketable surplus attracted new entrants and increased competition in palay/rice trading and milling. These changes affected various aspects of rural informal credit markets as reflected in the credit market structure and specific features of informal credit markets.

The Philippine experience in rural credit policy suggests that developing rural financial markets via supply-led finance (given an unfavorable macroeconomic policy environment) is counterproductive in the long term. This is because while such policies may have the desired effects of directing increased credit flows to the targeted sector, these tend to be temporary and financially burdensome. Further, the policies do not solve the fundamental source of difficulty in rural financial intermediation that arises from the material features of agriculture, viz., the high costs and risk of lending to spatially-dispersed production units and small loan sizes.

As our lessons indicate, such problems may be better addressed through nonfinancial market policies aimed at increasing farm productivity, prices and incomes through investments in public infrastructure in tandem with macroeconomic and sectoral reforms in the economy. However, in the short run, because structural rigidities in the real sectors (product, input markets, and institutional structure) take a considerable period of time to ameliorate, the importance of the timing and sequencing of policy reforms should be explicitly considered. In particular, given the relative speed of adjustment of the financial market vis-à-vis real markets, transitional, time-bound credit mechanisms or projects that enhance supply responsiveness may be required as stopgap measures. By ameliorating supply bottlenecks during the adjustment period, the political cost against fundamental economic policy reforms that may lead to policy reversal may be minimized if not eliminated. These should not, however, substitute for the fundamental macroeconomic and mesoeconomic reforms. In the context of developing rural financial markets it may well be that governments pay closer attention to developing agriculture and other real sectors through appropriate policies that lower transactions/information costs and increase the efficiency of trades in the economy. Examples of these include land titling and expenditures in rural infrastructures that reduce transactions cost, informational asymmetries and, thus, reduce distortions in rural credit markets.

Appendix Table 1
PERCENT OF FARMER BORROWERS WITH LOANS
FROM INFORMAL SOURCES^a
(Various Surveys, Philippines)

Reference year	Survey area	Total number of borrowing respondents	Percent of borrowers who obtained informal loans
1950s			
1. 1954-55	Nationwide	5,144 farmers	74.0
1960s			
2. 1960-61	Nationwide	1.1 million farm households (majority of whom are rice farmers)	88.1 ^b
1970s			
3. 1976	Nueva Ecija, Laguna Camarines Sur, Iloilo, Zamboanga del Norte	85	74.1
4. 1977	Nueva Ecija, Laguna, Camarines Sur, Iloilo, Zamboanga del Norte	78	79.5
5. 1978	Nueva Ecija, Laguna Camarines Sur, Iloilo, Zamboanga del Norte	74	76.4
6. 1978	Bulacan, Camarines Sur, Isabela	912 farmers (mainly rice farmers)	72.5
1980s			
7. 1981-82 (FIS)	Nationwide	1,699 farm households	68.2
8. 1986 (RSM)	Batangas, Camarines Sur, Pangasinan, Negros Oriental, Iloilo	502 farm and nonfarm households	85.4
9. 1987/88 (CM)	Nueva Ecija, Laguna Quezon, Batangas	322 farm, non- farm and landless households	94.4

a. Includes farmer-borrowers or households who borrow from both formal and informal sources.

b. In % of farm households (with cash loans only) who reported being mostly dependent on informal source. Of the total household sample only nine households reported to have borrowed in kind.

Sources:

1. L. de Guzman, "An Economic Analysis of the Methods of Farm-Financing in 5,144 Farms in the Philippines," 1957.

2. BCS, "Borrowing Practices of Farm Households, May 1961," PSSH Bulletin Series No. 12, Manila, June 1963.

3-5. BAS Survey, 1979 - 78, in TBAC-URBRF "Research on Rural Financial Markets in the Philippines." July 1979. Mimeographed.

Appendix Table 1 footnotes (continued)

6. TBAC, A Study on the Informal Rural Financial Markets in Three Selected Provinces of the Philippines, 1981.
7. TBAC, "Small Farm Indebtedness Survey" (Final Report), June 1986.
8. ACPC, Rural Savings Mobilization (RSM) Survey, 1986.
9. ACPC, Informal Credit Market (ICM) Survey, 1987/88.

Appendix Table 2
PERCENT OF LOANS FROM INFORMAL SOURCES
 (Various Surveys, Philippines)

Reference year	Total number of loans	Percent of informal loan
1950s		
1. 1954-55	2,411	87.6
1960s		
2. 1960-61	1,677,000	91.8
1970s		
3. 1976	100	63.0
4. 1977	91	68.0
5. 1978	84	66.7
6. 1978	2,110	82.6
1980s		
7. 1981-82	2,131	68.6
8. 1986	735	91.0
9. 1987/88	1,800	98.0

Sources:

1. L. de Guzman, "An Economic Analysis of the Methods of Farm-financing Used in 5,144 Farms in the Philippines," 1957.
2. BCS, "Borrowing Practices of Farm Households, May 1961," June 1963.
- 3-5. BASSurvey, 1976-78.
6. TBAC, A Study on the Informal Rural Financial Markets in Three Selected Provinces of the Philippines, 1981.
7. TBAC, "Small Farm Indebtedness Survey" (Final Report), June 1986.
8. ACPC, RSM Survey, 1986.
9. ACPC, ICM Survey, 1987/88.

REFERENCES

- Ahmed, Raisuddin, and Mahabub Hossain. "Developmental Impact of Rural Infrastructure in Bangladesh." International Food Policy Research Institute Research Report No. 3, Washington, D.C., October 1990.
- Asian Development Bank. *Informal Finance in Asia. Asian Development Outlook*. ADB: Manila, April 1990.
- Balisacan, A. "Philippine Agricultural Development in Historical Perspective," In *Philippine Macroeconomic Perspective: Developments and Policies*, edited by M.F. Montes and H. Sakai. Tokyo: Institute of Developing Economies, 1989.
- Balisacan, A. "Agricultural Growth, Landlessness, Off-Farm Employment and Rural Poverty in the Philippines." RTPAP Working Paper Series No. 91-01, January 1991.
- Bardhan, P.K. "Interlocking Factor Markets and Agrarian Development: A Review of Issues." *Oxford Economic Papers* (1980).
- Bautista, E.D. "Microeconomic Behavior of Informal Lenders in Rural Credit Markets." Paper presented at the ACPC-PIDS Seminar-Workshop on Rural Savings and Informal Credit in the Context of Financial Liberalization, Central Bank Building, Manila, June 7-8, 1990.
- _____. "Structure and Operations of Informal Credit Markets in Selected Rice, Coconut and Sugarcane Villages in the Philippines." Working Paper, Agricultural Credit Policy Council (ACPC), 1989.
- Braverman, A., and J. Stiglitz. "Sharecropping and the Interlinking of Agrarian Markets." *American Economic Review* 72 (1982): 695-715.
- Bell, C., and T.N. Srinivasan. "Agricultural Credit Markets in Punjab: Segmentation, Rationing and Spillover." Working Paper No. 7, World Bank, 1985.
- Bell, C., and T.N. Srinivasan. "An Anatomy of Transaction in Rural Credit Markets in Andhra Pradesh, Bihar and Punjab." World Bank Working Paper No. 8, 1985.
- Chalamwong, Y., and G. Feder. "Impact of Landownership Security: Theory and Evidence from Thailand." *The World Bank Economic Review*, Vol. 2, No. 2 (May 1988).
- Chan, F.C. "Bank Entry, Expansion and the Availability of Banking Services." ACPC Working Paper No. 88-02, 1988.
- David, C.C. *et al.* "The Nature of Productivity Growth in Philippine Agriculture, 1948-82." Paper presented at the Symposium on Agricultural Productivity Measurement and Analysis, Asian Productivity Organization, Tokyo, October 1-8, 1984.
- Dominguez, C.G. The Rehabilitation Program for Rural Banks. Agricultural Credit Policy Council Policy Brief No. 88-04, 1988.
- Esguerra, E. M. "Collateral Substitutes in Rural Informal Credit Markets: Recent Evidence from An Agricultural Rice Economy." Paper pre-

sented at the ACPC-PIDS Seminar-Workshop on Rural Savings and Informal Credit in the Context of Financial Liberalization. Central Bank Building, Manila, June 7-8, 1990.

_____. "The Redistributive Potential of the Masagana 99 Credit Subsidy." Master's thesis, School of Economics, University of the Philippines, 1981.

Fabella, R.V. "Price Uncertainty and Loan Repayment in Kind." Discussion Paper No. 89-10. School of Economics, University of the Philippines, 1989.

Floro, S. "Credit Relations and Market Interlinkage in Philippine Agriculture." Ph.D. dissertation, Stanford University, 1986.

Geron, Ma. Piedad S. "Microeconomic Behavior of Agents in a Credit-Output Market in an Agricultural Setting." Ph.D. dissertation, School of Economics, University of the Philippines, 1989.

Ghatak, S. "On Interregional Variations in Rural Interest Rates." *J. Developing Areas* 18 (October 1983): 21-34.

Hayami, Y., and M. Kikuchi. *Asian Village Economy at the Crossroads*. University of Tokyo Press, 1982.

Hayami, Y. and K. Otsuka. "Kasugpong in Central Luzon: Indianization of the Philippine Rice Bowl?" Paper presented at the World Bank Conference on Agricultural Development Policy and the Theory of Rural Organizations, Annapolis, June 1989.

Iqbal, F. "The Determinants of Moneylender Interest Rates: Evidence from Rural India." *Journal of Development Studies* 24(1988): 365-78.

Llanto, Gilbert M., and Purita F. Neri. "Agricultural Credit Subsidy." *CB Review* (October 1985).

Mitra, P.K. "A Theory of Interlinked Rural Transactions." *J. Public Economics* Vol. 20 (1983): 167-91.

Montes, M.F. *Stabilization and Adjustment Policies and Programmes: The Philippines*. Helsinki: WIDER, 1987.

Nagarajan, G.; M.A. Quisumbing; and K. Otsuka. "Land Pawning in the Philippines: An Exploration into the Consequences of Land Reform Regulation." *World Development* (forthcoming).

Quiñones, B.R. "Explaining Variations in Interest Rates in Informal Rural Financial Markets in the Philippines." Master's thesis, University of the Philippines in Los Baños, December 1982.

Roumasset, J., and J. Smith. "Population, Technological Change and the Evolution of Labor Markets." *Population and Development* 7 (1981): 401-20.

Serrano, S.R. "The Economics of Linking Credit to Other Markets in Camarines Sur, Bicol Region, Philippines." Master's thesis, University of the Philippines in Los Baños, June 1983.

Technical Board for Agricultural Credit (TBAC). "A Study on the Informal Rural Financial Markets in Three Selected Provinces of the Philippines." Manila, 1981.

_____. Small Farm Indebtedness Survey: National Report, Vol. 1. Manila, June 1986.

Tun Wai, U. "The Role of the Unorganized Financial Market in Economic Development and in the Formulation of Monetary Policy." *Savings and Development* 4 (1980): 259-65.