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**INCENTIVE STRUCTURES AND PERFORMANCE
OF RURAL FINANCIAL INSTITUTIONS:
THE CASE OF THE PHILIPPINES**

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ABSTRACT

The purpose of this paper is twofold: (1) to develop an institutional framework for understanding incentive structures in rural financial markets; and (2) to use this framework in exploring the diverse performance of Philippine rural financial institutions. Institutional analysis of financial intermediaries involves an understanding of the incentive structures that influence the manner of service delivery and the allocation of credit. Identifying the interests and motivations of lenders appears to be a central issue in understanding incentive structure design.

The analytical framework developed in the first section demonstrates that behavioral choices of lenders are guided by the following factors: (1) the institutional environment under which they operate; (2) the economic and non-economic objectives they pursue as well as the constraints they face; and (3) the existing mechanisms for accountability. The differential impact of specific environmental characteristics on formal and informal intermediaries gives rise to a spectrum of motivations such as rent-seeking and altruism that shape the objective function and the constraints of lenders. The diverse character of the lender-agents' objectives suggests that their behavior is far more intricate than straightforward profit maximization implies.

The second section discusses empirical findings about elements of the incentive structures of three types of rural financial institutions in the Philippines: private rural banks, trader-lenders, and the government-owned Land Bank of the Philippines. Evidence demonstrating certain behavioral predictions of the institutional analysis is compiled from surveys conducted by the Agricultural Credit Policy Council (ACPC) and the Philippine Institute for Development Studies (PIDS).

The paper argues that the incentive structures of financial institutions directly affect their performance in terms of efficiency and outreach. The analysis of incentive structures lays the micro-foundation for understanding the overall process of financial development. Therefore, policies for improvement of financial institutions' performance should concentrate on alteration of their incentive structures.

**Incentive Structures and Performance of Rural Financial Institutions:
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Incentive Structures and Performance of Rural Financial Institutions: The Case of the Philippines

by

Maria Sagrario Floro¹

Introduction

Despite the growing number of studies on financial markets, instruments, and contracts, there is a serious gap in our knowledge of *the specific sets of factors motivating the production and distribution of financial services by different types of intermediaries*. These “sets of motivating factors”, better known as incentive structures, provide the framework for decision making and interaction among savers, lenders and borrowers. The institutional analysis of incentive structures involves an examination of the underlying objectives of the financial intermediaries. In addition, it takes into account certain characteristics of the social and economic environment that modify and constrain the agents’ objectives.

Incentive schemes play a key role in determining the impact of policy on financial institutions’ performance. Von Pischke (1991) suggests further that “institutional development is stubbornly difficult, especially when incentives are not carefully analyzed” (p. 111). The variety of incentive structures associated with different types of financial institutions explain in large part the mixed micro-level responses to policy reforms. A detailed examination of these incentive structures would reveal the micro-foundations of success and failure in financial institutional development.

The diversity of rural financial intermediaries makes the study of their incentive structures especially interesting. The different rules of behavior governing public and private, formal and informal financial institutions result in different choices by the parties to a credit transaction. These choices, e.g. whether to provide credit to small borrowers (on the part of the lender) and whether to honor loan obligations (on the part of the borrower), ultimately affect the viability of the financial institution as well as the overall distribution of its services. Knowledge of the specific incentive structure of each financial institution would provide grounds for designing differentiated policies for efficient pooling, allocation and utilization of capital resources for the long-term benefit of the rural population.

This paper attempts to develop an institutional framework for understanding the incentive structures of rural financial institutions and then uses this framework to analyze the performance of the Philippine rural financial sector. The first section examines how the specific environment in developing countries influences lenders’ objectives and constraints. It also explains how the characteristics of the environment contribute to the formation of specific incentive structures in the formal and informal financial sector. The specific role of accountability (or lack thereof) in credit mechanism design is also discussed. The second section presents a case study of the

Philippine rural credit market. Three types of rural financial institutions are analyzed: privately-owned rural banks, informal trader-lenders, and the government-owned Land Bank of the Philippines. As suggested by the developed institutional framework, the specific behavioral patterns of each financial institution are demonstrated using evidence from surveys conducted by the Agricultural Credit Policy Council (ACPC) and the Philippine Institute for Development Studies (PIDS). Finally, the third section discusses the policy implications of the findings.

I. Institutional Framework for Analysis of Incentive Structures

A financial transaction involves the exchange of money for a promise to repay it in the future. The promise may or may not be credible. Unlike the spot transaction for "pure goods", in which the price tends to provide all the information relevant to the transacting agents, trust is a fundamental element of any financial deal. As long as there is no sure way for the borrowers and lenders to divine each other's intentions, there exists the need for a special set of incentives designed by the holder of a repayment promise (i. e. the lender) to influence the behavior of the originator of the promise (i.e. borrower).

A. Incentive Structures of Financial Institutions

The set of incentives, or what is referred to as the incentive structure of a financial institution, concerns the particular undertakings of the intermediary in stipulating the behavior of borrowers and ensuring the rights of depositors. Thus, the terms of the credit contract, e. g. collateral requirement, repayment method, and default clauses, constitute an important part of the incentive structure. In addition, the lender usually engages in information gathering, borrower screening, direct monitoring, and loan collection. Although costly, these actions ensure a better alignment of the borrower's actions with the lender's interests. Lastly, in the case of larger financial institutions, the incentive structure also contains corporate governance arrangements to ensure against opportunistic behavior on the part of the members of the staff.

The above outlined elements of the incentive structure suggest that it is not merely a set of financial rewards and benefits. It also contains rules and measures to ensure that agents (e.g. the borrowers) act in accordance with the interest of the principal (e.g. lender). The incentive structures are designed to reward actions favorable to the principal and to discourage actions that have adverse consequences for the principal. That is why the overall performance of the financial institution depends heavily on the characteristics of its incentive structure. Therefore, policies for improvement of financial institutions' performance should concentrate on altering their incentive structures.

Incentive structures can be multi-layered and quite complex in the cases involving intermediaries between the owner and the final user of funds. Bank depositors, for example, entrust their funds to the bank owner (or board of trustees) who in turn, delegates the duties of information gathering, loan monitoring, and loan collection to a staff, dealing directly with the borrower. Informal lenders likewise, use commission agents or middlemen to disburse and collect loans. The terms of employment of the bank clerks, loan appraisers, and middleman-lenders are

also part of the complex incentive structure, so they affect the performance of the respective financial institution.

Institutional analysis is an important tool not only for acquiring a better understanding of how incentive structures are formulated and changed, but also for appreciating the immense difficulties of institution-building. It provides a specific framework for discussion of human interaction either in the context of market transaction or, more broadly, in the context of social exchange. The framework of institutional analysis presumes that: (i) the basis for the performance of markets and economies is formed by individual actions; (ii) individual actions are guided by rules and norms called institutions; (iii) institutions are devised by people to help them handle uncertainty and existing market imperfections; and (iv) rules can change, but only when people find it in their interest to change them.

An individual's choice of an action in a particular situation depends on how he or she perceives the benefits and costs of various options and their likely outcomes. In the lender - borrower relationship, the behavioral choices are guided by the incentive structure devised by the former to establish trust. The design of the incentive structure is influenced by the following factors: (1) the institutional environment under which the contracting parties operate; (2) the objectives and constraints of the lender; and (3) the prevailing system of accountability. Each of these factors is discussed below.

B. Elements of the Institutional Analysis

1. The Environmental Setting

A clear idea about the market and institutional environment under which lenders operate is a logical first step in the institutional analysis. As Figure 1 shows, there are pertinent characteristics of the environment that directly affect the objectives of lenders, shape their constraints, and influence the level of information they possess. These attributes include a) level of development of the market infrastructure, b) existing informal norms of behavior, c) ownership and distribution of assets, particularly land; and d) degree and form of government intervention.

The existing market infrastructure in developing countries is often assumed to handle adequately the ever expanding and complex web of impersonal exchanges. Well-defined property rights, effective enforcement and legal systems, developed communication systems including roads and telephones, and other forms of sophisticated information networks are mistakenly assumed to exist in LDCs. Although such a premise underlies many market-oriented programs and strategies, in most LDCs, the legal, technical, and market infrastructure is unevenly developed. In the rural areas, it is likely to be either ineffective or completely absent, thereby making the cost of transacting in the market non-trivial.

The negotiation and enforcement costs that pertain to market exchange are present in credit transactions as well: the valuable attributes of the collateral (or its substitute) must be measured, claims must be protected, and agreements enforced. Due to the presence of

uncertainty (e.g. promises can be broken) in an inter-temporal market transaction and because of the importance of trust, the information costs associated with a credit deal are much higher than those associated with the simple exchange of market goods. Informal means are largely employed to reduce the asymmetry of information, to align as much as possible the interests of the borrowers to those of the lenders, and to reduce moral hazard problems. Personal relationships, social ties, and repeated dealings become common sources of information in rural areas and are used not only in borrower selection but also in monitoring and enforcing contractual obligations. The institutional covenants to the credit -- e.g., interlinkage with other transactions, the evolution of patronage and loyalty, etc., become more important as the agency costs relative to the size of the transaction rise.

The non-homogeneity of lenders and borrowers accounts in part for the variety of incentive structures observed in the rural credit markets. The heterogeneity of rural borrowers reflects the extent of skewness in land distribution and the accompanying production relations. The uneven distribution of land implies that borrowers will differ both in their ability to establish creditworthiness and in their ability to influence the terms of the credit contract. Borrowers' access to land determines their credit-worthiness to lenders for two reasons: land can serve as a collateral and, as a factor in production, it can produce crop for in-kind loan repayment. The incentive structure of each financial institution reflects its preference for particular types of collateral and forms of returns to lending activity. For instance, most banking institutions require a land title as a prerequisite for any loan application. On the other hand, collateral substitutes, such as the borrower's output, land usufruct rights, or labor services, are accepted by some lenders depending on their transferability and usefulness. Collateral substitutes are especially prevalent in interlinked market transactions. In summary, land distribution, land tenure, levels of marketable output, and the ability to participate in repeated dealings with a lender create opportunities for borrowers to establish their credit-worthiness.

The heterogeneity of lenders arises out of differences in the information they possess and the transaction costs they face when sorting, monitoring and enforcing agreements. Sources of differential transaction costs across lenders include the type and range of wealth assets and economic activities that they are engaged in, the related decision-making structure, and the different informal rules that are adopted to deal with uncertainty and minimize the costs of exchange. The lender's optimization problem as well as the pertinent time horizon are affected by the range of economic activities they are principally engaged. In addition, the means of contract enforcement and information gathering may differ with the size and the degree of centralization of the lending institution².

The inadequate development of markets, the informational barriers to entry, and the non-homogeneity of market agents can give rise to economic rent. Whether this rent is realized and to which party it accrues would depend on the relative bargaining power of lenders and borrowers and also on the costs of assessing the rent. While potential rents are always present when quantity closure is involved, their size increases as the supply cost of credit declines. The cost decrease, however, is not reflected in the interest rate charged.

The level of exposure to government regulation is another factor that closely influences the incentive structures of financial institutions. Financial sector regulation and the government's ability to enforce laws and court rulings affect directly transaction costs and hence, the specific objectives of the lender. In addition, the extent of government mandate over the process of financial intermediation as well as the presence of special concessions and/or subsidies influence the behavioral rules adopted by lenders. Preferred rediscounting rates to a particular financial institution, for example, lead to a formulation of an objective function that is overwhelmingly based on appropriating the gains from control of and access to government resources. Unless countervailing mechanisms are in place, this may create an attitude that works against the financial viability of the intermediary.

Although the informal sector is not regulated, it responds to regulatory measures in an indirect and protracted fashion. When regulation changes the feasible alternatives of the formal institutions, the choice set of the informal sector is also modified. Given the significance of the informal sector in many LDCs, its responses to proposed government policies have to be evaluated carefully.

The above elements of the environmental setting define and constrain the choice sets of the different financial intermediaries. Lenders make choices about borrowers, loan terms, and enforcement mechanisms based on the gainful opportunities they have, given an existing set of constraints. Attributes such as imperfect market infrastructures, asset distribution, informal norms, and exposure to regulatory measures affect the choices of financial institutions in varied ways. These constraints weave an intricate web that influences the financial institution's incentive structure.

2. Lender's Objectives and Constraints as the Basis for Incentive Structures

The objectives and constraints of the contracting parties constitute an important element of institutional analysis. Figure 1 charts the interplay between various environment attributes and the resulting configurations of lenders' objectives and constraints. The available economic opportunities in the rural areas, the pertinent social and cultural norms, as well as the government regulations give rise to a vector of economic and non-economic returns to lending that are not captured by "pure financial profits". The diversity of incentive structures of financial institutions reflects the fact that lenders' optimization rules may diverge significantly from a standard profit maximization. The following discussion explores in detail how the specific characteristics of a given lender along with the above discussed market imperfections may give rise to rent-seeking or altruistic components in the objective function.

The existence of potential rent often leads to rent-seeking behavior especially if one of the parties, typically the lender, has greater bargaining power and can influence the actions of the other party. Rents that can accrue to lenders consist of two types: economic rents, that go through the market and are relatively easy to measure by the increase in profits; and rents in the form of political patronage, loyalty, and favors from borrower-clientele (e. g. labor service in exchange for credit line access) that are more difficult to capture. Maximizing the non-measurable

returns to lending may be a central objective of the lender and may result in a willing sacrifice of pure banking profits.

The basis for rent-seeking behavior is often provided by some specific element of the credit exchange. Since repeated dealings are an advantageous way of establishing trust, a credit transaction usually consists of a series of multi-period contracts between the same parties. Repeated dealing serves ultimately two purposes: as an information gathering mechanism for the lender, it helps reduce loan transaction costs; as an incentive mechanism for the borrower, it ensures easier future access to loans. This implies that profits in a single period may not be as important as returns that accrue either in the long term or over a cumulative number of periods. It also suggests that the lender can engage in a Ponzi scheme that may threaten the longer-term sustainability of the financial institution.

Rent-seeking behavior is predominant where self-interest and individualistic attitudes gradually replace social preference (group interest) and other self-imposed constraints for mutual cooperation. If the potential gain from the economic rent is greater than the costs of defying accepted norms of conduct or cooperative behavior, the lender will tend to incur cost and exert effort to acquire and maintain its advantaged position. Examples of strategic expenses include accumulating diversified forms of capital, erecting barriers to entry, cost of lobbying, etc (Tirole 1988). It is possible that the whole banking operation is complementary to a principal activity, i.e. rather than being an independent, profit-maximizing enterprise, it represents a strategic expense necessary for the appropriation of rent associated with another line of business or political power.

Access to concessionary funds provided by the government can create a special type of rent-seeking opportunities. It can reinforce lenders' opportunistic behavior by allowing them to use the funds for inside-lending, corruption, or building of political support. Thus, financial institutions may be set up with the sole purpose of enabling lenders to gain access to cheap funds for their non-banking enterprise or for other non-economic endeavors.

At the other end of the spectrum of motives in lending are the altruistic motivations on the part of some financial institutions or lenders. These include feeling of satisfaction for doing public service, helping a poor friend or a poor farmer, etc. The pertinent question one may ask is whether these are likely motives for rational agents in credit markets as well. The conventional idea about social concern and other altruistic motives is typically explained as follows: any lender who provides credit in order to assist in the survival of others would reduce his or her own chances of survival. Therefore, altruistic lenders are at a competitive disadvantage compared to those who single-mindedly pursue their own interests. It should be noted however, that there is a subtle but important distinction to be made between pure altruism as described above and "pseudo-altruism" whereby the lenders are really acting on some long term selfish interests. They are willing to compromise their present well-being to help others because they expect to receive some form of reward later or to benefit from a kind of insurance that enhances their long-run interests.

Without going into the whole debate regarding the true nature of human motives, it is

possible to have a mix of self-interest and group/social interest. In fact, some societies and cultures provide the environment that fosters the formation of shared identities and collective action. These can be further reinforced by certain forms of political and economic structures. In such an environment, market agents, including lenders, make decisions that are shaped by seemingly conflicting interests. They are forced to consider how much they care about others (e. g. relatives, friends, tenants, or just borrowers) in the context of their general principle of fairness. In the case of lenders, they would be willing to explore options which are costly to them but beneficial to the group. Traits like concern for others' well-being, honesty, and integrity pay off under such conditions even in strictly wealth-maximizing terms (North, 1990).

The operational criterion of altruistic motives in the case of financial intermediaries is a combination of profitability with outreach. This implies that the interest rate covers most, if not all costs of lending. The loan is sound, but credit still reaches the marginal households in the rural areas. For example, in the case of repeated credit transactions, passing the cost-saving elements of a credit exchange on to the borrower, instead of capturing it as economic rent implies altruism. Similarly, altruism may inspire lenders in targeting and allocating credit to marginal or disadvantaged groups. The interdependence of individual and social interests arises in the operational criterion through the postulate that a broadly-based increase in incomes in the rural areas creates effective demand of the type that can become the locomotive of self-sustained growth³.

The environmental setting affects not only the objectives of lenders but also the type of constraints they face. There are large initial setup costs for lenders in acquiring pertinent knowledge about potential borrowers in a setting where the informational infrastructure is inadequate or nonexistent. Siamwalla et al (1993) pointed out in their study of Thailand's informal credit markets that establishing creditworthiness to a lender takes about seven years on average. Similarly, in a survey of Pakistan's informal lenders, Aleem (1993) found that the initial sunk costs of screening borrowers are considerably high, although they may drop rapidly after some time due to significant learning effects. The supply cost of credit decreases as increasing returns arise in the process of accumulating information by the lenders as well as in the process of developing enforcement mechanisms for repeated action⁴.

A lender who faces an opportunity set provided by the prevailing economic and social environments may not have to incur significant costs of information gathering and screening of borrowers. Kinship ties, repeated transactions in another market, extensive community-based networking provide a basis for building personal relations over time and allow for increased familiarity with borrowers. The information acquired through existing social and economic relationships requires high investment in terms of new entrant-lenders' time and thus provides a temporal barrier to entry.

The considerations introduced in this section suggest that lenders' objectives and constraints determine in large part the characteristics of the incentive structures adopted by different financial institutions. The incentive structures in turn, influence the behavioral choices of borrowers and thus become an important determinant of financial institutions' performance in

terms of allocative efficiency and distributional impact.

3. The Role of Accountability in Credit Mechanism Design

The third element of institutional analysis involves the system of accountability. One of the vital roles financial institutions perform is obtaining funds from surplus households (savers) and passing it on to deficit households (borrowers). In this sense, the financial institution acts as a principal vis-a-vis borrowers and as an agent vis-a-vis depositors. In the case of government ownership or subsidization, the financial institution acts also as an agent vis-a-vis taxpayers. The primary concern in the design of the incentive structure is to ensure that the financial institution achieves its objectives as a principal (i.e. get creditworthy borrowers, etc.). However, the role of the financial intermediary as an agent (i.e. as repository of funds of savers) requires certain elements in the incentive structure to ensure that the behavior of the intermediary does not undermine the interests of the savers. These elements of the incentive structure are exemplified by a system of accountability.

Financial intermediaries as agents of a dispersed and unorganized set of savers act on behalf of their own interests that are not necessarily identical to those of the owners of the funds. Officers and staff of financial institutions, for example can seek to maximize salary, security, power, and perquisites even when a bank's resources could be more productively directed elsewhere. Middlemen-agents of informal lenders may collude with borrowers against the interest of the lender. In summary, the absence of accountability allows credit delivery agents to operate on the basis of their own interests which may or may not promote functional efficiency and socially desirable allocation of credit. The erosion of trust has serious implications not only for the long-term viability of the financial institution but also for the economy as a whole. Hence a system of accountability must exist in order to maintain the necessary confidence in a well-functioning credit market.

In an ideal world of perfect markets, the requisite trust may be established by a well-functioning saver-owners' monitoring system. Acting in their own interests, the depositors would require a system of checks and balances for risk taking and would monitor the intermediation and pooling activities of the financial intermediary. In this manner, failures of intermediaries, bank runs, financial panic, or the entire collapse of the financial system would be avoided. In reality, market imperfections as well as growth of the financial sector both in size and in scope render the self-monitoring scheme unfeasible. The role of a third party with sufficient authority to create and administer monitoring rules looms into importance.

Within the formal financial sector, the state usually takes on the function of protecting savers' interests by means of banking regulations and other financial policies (Stiglitz 1993). Governments in many countries have placed themselves at the center of the financial system through ownership and control, grants of privileges, exemptions, loan guarantees, and allocation of funds. For example, banking regulations are promulgated to maintain the stability and solvency of systems based on fractional reserve banking. Additionally, governments tend to influence the

allocation of credit either by ownership of financial institutions or by subsidy programs. The government becomes a special source of loanable funds for socially desirable but unmet credit demand.

Government attempts to effectively monitor and impose prudent financial intermediation, however, can fail and have failed in several occasions (Vittas 1992). In the absence of effective government regulation, the question of lender-agents' accountability becomes relevant. But where do the restraints on lender-agents' behavior, particularly in the non-regulated informal sector come from? It is often assumed that competition for loanable funds provides the necessary and sufficient pressure for financial institutions to adopt some rules that mitigate the agency problems. But the inherent imperfections in credit markets and the tendency towards market segmentation indicate that there are limits to competition among financial intermediaries. The need for financial and institutional innovation in this area is quite urgent and requires more attention from both researchers and policy makers.

The important operational issue here is that incentive structures can be directly influenced or modified by a system of accountability. The latter reduces the areas of discretionary behavior for financial agents and imposes a disciplining mechanism. Institutional arrangements such as feedback processes between an external regulatory agency and the financial institution, can counteract opportunistic behavior. Likewise, dissemination and sharing of information tends to reduce the problems of moral hazard, etc. The more information that the savers-owners have about the characteristics of the financial institution, the lower the possibility of free-riding or abuse. The existence or lack of mechanisms for accountability has a significant influence on those elements of the incentive structure that define the discretionary behavior of financial agents. Additionally, the evolution of the incentive structure is linked to the development of accountability mechanisms, and to the changes in the bargaining power of the agents who devise and enforce disciplining rules.

This section has examined at length the three elements of institutional analysis of rural financial institutions. It has shown how lender objectives, constrained by the environmental setting and the existing system of accountability, determine in large part the incentive structures of different financial intermediaries and influence their performance in terms of economic efficiency and outreach. Empirical evidence on these issues is examined in the next section using the Philippine rural financial institutions as a case study.

II. Incentive Structures of Rural Financial Institutions in the Philippines: A Case Study

The following empirical study involves an analysis of incentive structures of three types of rural financial institutions namely, a) the privately-owned rural banks (RBs), b) the government-owned Land Bank of the Philippines (LBP), and c) a prominent lender group in the informal sector namely the trader-lenders. With the exception of the rural banks and the Land Bank of the Philippines, credit allocation by the formal banking system to agriculture has been persistently low; in fact it was only 6.2% in 1990, down from 9.3 percent in 1981 (Table 1 and Figure 2) even

though agriculture contributed an average of 38 percent of Gross Domestic Product for the period 1981-1990. In terms of resources, the LBP and the RBs system's asset base accounted for only about 3.8% and 2.3% respectively, of the total banking system's total assets (Table 2). Their loan portfolio and deposit base likewise make up a small proportion of the total.

Despite its relatively low resource base and poor deposit mobilization, no other formal institution services agricultural-based clients as extensively as the family-owned unit rural banks⁵. The rural clientele is further served by the specialized government-owned Land Bank of the Philippines (LBP). With its mandate to provide financial services to agrarian reform beneficiaries, the LBP operates through its 28 branches and 80 field office networks. LBP makes use of the existing rural banks and cooperatives as its secondary financing arm.

Informal institutions in rural credit markets in the Philippines are also significant although its size and economic performance are not exactly known except for the evidence provided by several micro-level sample surveys. Table 3 lists the various studies on informal credit markets during the period 1954-87 and indicates the relative importance of informal financial intermediaries based on the study findings.

Data providing some indicators and indirect evidence of the institutions' underlying objectives and incentive structures are derived from the results of three sample surveys conducted by various government agencies. The analysis of bank behavior involves the use of the 1987 Comparative Bank Study (CBS) survey covering both management and economic/financial aspects of bank operation.⁶ The sample consisted of 65 banks including 22 rural banks operating in seven provinces of the Philippines.⁷ Another bank survey was conducted by the Agricultural Credit Policy Council as part of its 1991 Financial Intermediation Survey and this included client-level data gathering using 954 sample loan accounts of bank clientele. More than half of all records examined are accounts of rural bank borrowers while 37% are loan records of government bank borrowers. Finally, the study on trader-lenders' behavior involves the use of the 1988 Rural Informal Credit Market (RICM) survey conducted by the Agricultural Credit Policy Council. The survey involved 424 borrower households and covered three study areas in the Philippines which are predominantly rice, coconut and sugar growing areas. However, only subsamples on rural banks and on rice-growing area data were utilized for purposes of this study.

Interviews of bank owners/managers, informal lenders and Land Bank officials conducted by the author in early 1992 provided some insights into the complexity of motives and incentives issues. Land Bank of the Philippines data provided by the LBP officials and the World Bank were used in the analysis of its performance. Secondary data were also gathered from existing studies on rural financial institutions. In interpreting the results, however, we need to take note that the findings are only indicative of the more observable characteristics of incentive structures, lender objectives/ behavior and financial institutional management. They are by no means adequate in depicting the underlying motives and incentives behind institutional rules and agent behavior.

A. Motives and Incentives

Lenders' motivations and constraints are important elements in understanding institutional rules that structure the interaction between lenders and borrowers. They provide a good starting point for assessing the nature of incentive structures since the latter are devised to help fulfill the specific motives of the lenders and to deal with particular constraints. The following discussion examines the likely objectives of rural bank-owners, trader-lenders and Land Bank officials that influence the design of the incentive structures in place.

1. Rural Banks and Rent-Seeking

Rural banks in the Philippines are primarily family-owned/controlled unit financial institutions.⁸ The formation of these unit banks in the early fifties was a result of government's effort to institutionalize the informal sector. Small in terms of capitalization base, the rural banks were then perceived as the main stalwarts of agricultural credit delivery. Von Pischke (1991, p. 196) pointed that these rural bankers were

[P]rominent local citizens who were often involved in moneylending. By becoming rural bankers they could obtain some capital from government, represented by preferred stock, to supplement their own. They could expand their moneylending operations by soliciting deposits... In addition, their incomes as shopkeepers, ricemillers, transporters or landlords could increase from growing rural economic activity.

The ownership status as well as the particular business interests of these rural bank owners suggest that rural bank operations may be performing certain functions for the principal stockholder-owners other than simply maximizing the bank's profitability. Interviews of bank owners/managers conducted by the author in early 1992 and various research studies as well as the findings of the CBS survey of rural banks strongly suggest that there are other important considerations (or motives) of the principals that are related to the banking operations. The CBS survey indicates that two-thirds of the sample rural banks admit to not maximizing their (bank) earnings even though they still continue to maintain the banking operations.

For many rural bank owners, the prevailing rural environmental setting, specifically the extent of information asymmetry, a legacy of access to government concessionary funds, and credit market segmentation allow for rent-seeking behavior. It should be noted that economic rents arise as a result of incomplete markets as well as that of government regulation (Yotopoulos 1996, p. 10). The issue of rent-seeking can be reduced to who captures the economic rents and how they are utilized. Opportunities for bank owners capturing economic and non-economic rents have also risen from their economic and political positions, whether as prominent local politicians or wealth businessmen with expanding commercial, real estate and business enterprises. They are able to convince and/or manipulate the government to grant them certain concessions such as access to cheap credit or to enforce entry restriction. In so doing, they are able to capture rents which reflect a diversion of value from society in general, with a net loss of value in the

process. This net loss of value, referred to as "social waste" results from the effort, time and other resources invested by the rent-seeker, in attempt to maintain the government favor (Buchanan, 1986). Other potential entrants into financial activity likewise will utilize effort and resources by means of persuasion, lobbying, bribery, etc. in order to shift the favor to them, further reducing the value. At the level of the individual bank owner, however, these activities are rational and the behavior as such, is not different from that of utility maximization.

A majority of the principal stockholders in rural banks seem to have concurrent ownership of a number of businesses, including other financial institutions, manufacturing, farming, trading and service enterprises (Table 4). In the 1987 CBS survey of 22 sample rural banks, 30% of the bankers own other banks/financing companies while another 34.5% own business/commercial enterprise including garments, retail store, fertilizer dealership, ricemill etc. Other economic activities bank owners were engaged in include farming and trading. Only 5% of the bank owners admitted that there is no link between the bank operation and their business.

About half of the sample banks admit that the operation of a rural bank provided some advantages to their business -- advantages which are not calculated to be reflected in lowering the borrower's effective rate of interest⁹. For instance, rural banking facilitates interbank borrowing (for owners of thrift banks and savings and loans association) and access to funds/credit line (intercompany financial assistance, particularly with other business enterprises held by the bank owner). In addition, farmworkers, employees, business clientele and stockholders become bank clients and vice versa. This expanded client base shared by their multiple businesses also enhances the bank's access to information vis-a-vis personal relationships and repeated dealings. The rural bank serves not only as creditor but also as a repository of funds for the owner's enterprises.

The introduction of credit subsidy programs in the early 1970s by the Philippine government seems to have reinforced the rent-seeking behavior among some rural banks. It has raised the bankers' willingness to incur expenses vis-a-vis foregone financial profits from rural banking as well as invest time in order to gain access to credit subsidies. These credit schemes involved using the rural banks as conduits for below market-interest, no-collateral, guaranteed loans to small farmer beneficiaries. Access to government funds at concessionary rates created a new base within the existing power structure in the village or community. This new base involves the exercise of power and influence by those with control and access to subsidized credit funds. Some of the rural bankers did take advantage of their prime position and used discretionary powers to allocate credit in order to gain political patronage, bribes, loyalty and other favors.¹⁰ As the study by Esguerra (1981) demonstrates, the credit subsidy programs not only benefitted farmers with bigger landholdings; they were also used as vehicles for enhancing the political ambitions and other goals of the conduits.

In cases where the rural bank engages in inside lending, bankers obtain further benefits through below-market interest loans to their other business. Evidence of this practice is difficult to obtain but Tolentino (1987, p. 47) raised the possibility that rural bankers may extract economic rents from subsidies not delivered to beneficiaries: "The rural bank failed but the rural banker got rich." Von Pischke (1991, p. 197) also pointed out that during the Philippine economic crisis of

the early 1980s, "rural bankers generally fared better than their banks because their other interest cushioned their banking losses. So, as traders, rice millers, transporters, and landlords they were still in a position to lend to their clients and tenants."

The preceding discussion illustrates that in several cases, rural bank lending reflect the extended family ties, political and social structure as well as existing economic relations vis-a-vis the lenders' underlying motivations. Rural banks in the Philippines therefore are likely to operate with some rent-seeking objective in mind.

2. Dual Objectives of Informal Lenders

Financial intermediation in the rural areas is also performed by informal institutions which are outside the regulatory ambit of the monetary authorities. The formal financial institutions as pointed out earlier largely remained inaccessible except for the highly collateralized borrowers. The results of the 1988 Rural Informal Credit Market (RICM) survey confirms this well-established observation¹¹.

The dominant group of informal lenders tends to vary according to the characteristics of the major agricultural activities in the area and the accompanying relations of production. Trader-lenders were less important in the coconut-growing study areas, however, compared to farmer-lenders and landlords. In the sugar-growing areas, sharetenancy remained prevalent and landlords are the main source of informal finance of rural households accounting practically for all of their credit needs. Landlords primarily extended credit only to their tenants either directly or through their overseer¹². In the rice-growing areas, various individuals engaged in marketing activity. Trader-middlemen, input dealers and ricemillers accounted for the largest share of informal loans in the 1988 RICM survey both in volume and number at 35 and 38 percent respectively¹³. This was followed by landlords and farmer-lenders accounting for another 33% and 31% of the number and volume of informal loans received by rice households (Table 5). Table 6 gives a brief profile of the borrower-households in the rice-growing areas.

The link between the lender's principal activity e.g. farming or trading and moneylending activities in the areas may be much more prevalent than what the data indicate due to the multiplicity of economic undertakings of many informal lenders that makes categorization less meaningful. Casual field observation disclosed, for example, that some bigger farmer/landowners have integrated trading with farming and are a major source of credit in rice growing areas. Other micro-level studies also mentioned the growing significance of farmer cum trader-lenders (Geron 1988, Agabin 1988, Floro and Yotopoulos 1991)¹⁴. The increased demand for hired labor in the study area has brought about the need for labor monitoring and supervision. Loans tied in with tenancy or labor service served as a monitoring device by landlords or farmer-employers to reduce the burden of supervision.

Market interlinkage provides several advantages to landlords, trader-lenders and rich farmers in the complementary activity, moneylending. The repeated dealings and regular market transactions provide the lender access to information (Table 7). The lenders' familiarity with their

borrower-clientele as a result of transactions in another market constitutes another basis for building personal relationships in addition to existing social and familial ties. By the nature of the relationship-building process that becomes the foundation of credit exchange, the initial entry costs are high indeed.

Interlinking of contracts also provide additional enforcement mechanism to the interlinked informal lender that a pure monyclender or a bank do not possess¹⁵. It allows for certain cost advantages to be realized (e.g. reduction in monitoring and other elements of the costs of transacting) which enable the trader-lender to impose greater costs on new or potential entrants.

Both the interlinking of market transactions and personal relationships serve as instruments for monitoring the terms of the contract. They raise the costs of non-compliance of farmer-borrowers with the terms, thereby reducing the risk of default. Of the reported informal credit transactions in the sample rice-based villages, 72% required either the sale of output, mortgage of land or provision of labor service. These collateral substitutes are prevalent not only in the rice-growing areas but in the export-crop (coconut and sugar) growing areas as well. Landlords and farmer-lenders in particular use moneylending activity to overcome their input-provision (land or labor) constraint and to avoid labor shirking.

By and large, segmentation by geographical boundary seems to be pronounced in the informal credit market. Trading activity for example is not only commodity-specific but also area-specific. The spatial limitations may arise out of poor road infrastructure and transport/communication systems that raise transaction costs as well as the cost of expanding a lender's network of personalized relationships. Credit cum tenancy arrangements are even more restricted to the specific individual in the land contract.

In a world that is characterized by imperfect markets and by increasing

returns to information and repeated interaction, the imperfect and fumbling efforts of potential entrants reflect the difficulties of meeting the high initial entry costs associated especially with personal contact-building. As one informal lender interviewed by the author pointed out, the asset of creditworthiness can only be acquired over time. The large setup costs in trust-building give rise to economic rent that informal lenders are able to capture in different markets - land, labor, output, credit- via a complex set of rules and conditions.

3. Objectives of a Public Financial Institution

A third financial institution that has recently gained importance in the rural credit markets is the Land Bank of the Philippines (LBP). LBP was initially established in 1963 as one of the four specialized government bank (SGBs) primarily responsible for financing agrarian reform and for serving the credit needs of agrarian reform beneficiaries (ARBs)¹⁶. Its powers were broadened when it was allowed to operate its commercial banking arm that caters to agribusiness and rural and urban-based enterprises. According to Land Bank officials, this Banking Sector arm of LBP operation largely subsidizes its agrarian reform/small farmer lending operations.

In 1990, LBP assumed the role of an apex institution for (formal) rural credit. Specifically, it took over from the Central Bank the administration of the Agricultural Loan Fund. By December 1990, loans to agriculture, comprised of farmer production loans and commercial agricultural loans, reached 4.4 billion or 51% of its total loan portfolio (World Bank 1991 p. 6). Further disaggregation of this figure shows, however, that two-thirds of the LBP loan portfolio were channeled to commercial agricultural and non-agricultural purposes. The share of farmer production loans in fact declined from 36% in 1980 to 21% in 1990 (Table 8).

Being a public entity, the Land Bank as with other public institutions, has a potential advantage over the private alternatives. It provides government with additional control instruments to correct any deviation between social and private returns that may arise from market failure. For instance, if rural outreach to the marginal segments of the population by private financial institutions is limited, then the Philippine government can operate its own financial institution to tackle the issue.

Hence, public institutions are often assumed to act as if they maximize social objectives; that is, they are agents operating in the interest of society as a whole. A government-owned rural financial institution such as the Land Bank is expected to modify its profit-maximizing objective by adopting an altruistic form of self-imposed constraint in choosing a particular incentive structure. The behavior of civil servants and government administrators is supposedly subject to a code of conduct that emphasizes social responsibility.

The above assumption -that the public interest can be represented by a well-defined social objective function which public financial institutions seek to maximize - may be rather bold. The situation is complicated by several attributes of a public financial institution operating in a particular regulatory environment and with hardly any effective system of accountability.

One issue refers to staffing. Civil servants who undertake much of the implementation of borrower screening and loan collection do not often have incentives to perform their obligations efficiently. In fact, unless some accountability measures are in place, the staff and officers may be immune from the consequences of their action. Misreporting of compliance and falsification develop to create an appearance of meeting targets even though actual behavior may stray from the stated objectives. Civil servants and bureaucrats may seek their own self-interest through rent-seeking.

A second attribute of a public financial institution is its advantaged position for accessing public funds. This modifies the behavior of a public financial institution in two ways. First, easy access to public funds may create a disincentive for basing their credit funds on the mobilization of local savings. Deposit generation is often deemphasized due to the time and effort required to overcome rural suspicion and establish confidence among rural depositors. Instead, the administrators may spend more of the institution's resources in lobbying efforts to the governments and their foreign donors for more funds. Secondly, control over public funds can be in itself a powerful incentive that nurtures political aspirations and the public financial institution can be dominated by politically motivated administrators, bureaucrats or appointees. The financial institution thus becomes a vehicle for patronage-building.

LBP's social objective, namely, the provision of credit to small farmers, particularly the agrarian reform beneficiaries, is mandated by law. In fact, its *raison d'etre* derives from this social mission. Because of its specific role, LBP also has access to various government funds which totaled 3.2 billion pesos as of June 30, 1991.¹⁷ In fact, the major funding sources of LBP included investment earnings and the infusion of special government financing program funds (Chan 1992). Its small farmer loan repayments as well as loan interest earnings constitute an insignificant source of funds and proportion of its total operating income respectively.

The existence of the Land Bank rests upon its administrators' ability to provide some measurable indicators of its outreach and financial success. Its credibility to the taxpaying public and to the legislators is determined by its ability to show an increase in volume lending to small farmers. At the same time, it must satisfy its funding sources, namely the various government agencies and foreign donors, with good loan collection rates to prove its financial viability. This strongly motivates the LBP officials to evolve incentive structures that fulfill these conditions. But a system of incentives that is heavily dependent on providing output or input measures or indicators easily become dysfunctional since they tend to lead to credit transactions that are more numerous but superficial.

While they may be well-meaning and socially-committed individuals or public servants, the staff and administrators of a public institution are also likely to have their own individual-based interests and objectives. Continued access to foreign donor funds and maintenance of their political appointments may lead to actions that merely provide good indicators of outreach to donor agencies and the political constituency. It can lead to aggressive lending without due process of assessing the creditworthiness of potential borrowers. A recent assessment of the LBP operations in fact has raised caution that the rapid formation of cooperatives for use as fund

conduits may tend to undermine the long-term sustainability of these financial institutions (World Bank 1991, Chan 1992).

In view of these considerations, it is possible that the social objective function of LBP may be met only superficially. If the outreach criterion adopted is a "soft" one i.e. in terms of increase in lending volume to "small" farmers, then LBP adoption of the wholesale lending approach with its visibly established delivery system and network would sufficiently meet any donor or agency terms or conditions (Table 9).

There is however a set of implicit assumptions behind such an approach which are not altogether different from those of the past credit subsidy programs. The wholesale lending approach presupposes that the two main conduits of Land Bank loans, namely the rural banks and the cooperatives primarily lend to small farmers. This implicit assumption does not seem to hold in the case of rural banks as mentioned earlier and preliminary studies of cooperatives in the Philippines show that they are quite diverse in terms of membership (Agabin 1989, Lamberte and Relampagos 1991).

It is expected that the wholesale lending approach not only reduces the Land Bank unit loan transactions cost but also its risk of default. If good repayment rates tend to suffice as indicators of the 'financial viability' of LBP's lending operation, then LBP may create incentive schemes and accounting procedures so that good collection rates are indeed reported. Since Land Bank initially worked with well-established cooperatives, its present collection rates are quite impressive by banking institution standards (Table 10). However, as new cooperatives come on stream and the level of borrowers' experience is reduced, there is a high probability that repayment performance will deteriorate (World Bank 1991 p. 14).

B. Incentive Structures of Rural Financial Institutions

In this section, we identify the main features of the incentive structures adopted by the three Philippine rural financial institutions. In particular, we compare the set of measures and rules that rural bankers, informal lenders and Land bank officials provide to their borrowers and/or to their staff, specifically their borrower screening rules, monitoring and enforcement mechanisms.

1. Rural Banks' Incentive Structure

As family-owned enterprises, rural banks tend to have a more personalized style of management compared to the bigger, more hierarchical formal financial institutions¹⁸. While rural banks do not have a uniform decision-making structure, staffing and operational policies, there are broad observations pertaining to their lending operations that one can make.

First, various stages of the lending process may receive different emphasis and can be subject to different degrees of ownership control. Ownership control, for instance, may be more pronounced in the borrower sorting and loan disbursement phase than in loan collection

procedure. Table 11 gives the degree of latitude exercised by the rural bank manager in loans approval and decisions on deposit terms as compared to the bigger commercial banks. Loan approval limits are much lower for rural bank managers than say the commercial bank managers. Loan sizes between 10,000 to 50,000 pesos are relegated to the family-controlled Board of Directors while the Bank President or Chair of the Board usually has discretionary powers on loans over 20,000-50,000 pesos. It is interesting to note that seven (32%) of the 22 sample rural banks as compared to only 2 (9%) of the 23 sample commercial banks in the 1987 CBS survey operate without any written loan policies, leaving room for arbitrary decisions on the part of the RBs Board of Directors or of the Bank President (Table 12).

Loan screening, monitoring and enforcement planning are delegated to lower level staff including the loan appraiser, credit and collection staff and the cashier, while in other types of banks, this function is done by the head office or of the branch manager. Moreover, only 5 (28%) of the sample rural banks in the CBS survey provide any staff incentive for improving their loan collection efforts (Tables 12 and 15). These ranged from some form of salary bonus to percent commission of loan collection efforts.

Since the financial viability of an institution depends to a large extent on its reduction of borrower's default risk, a profit-maximizing bank employs screening techniques to insulate itself from default. It exercises caution to ensure that the borrowers are financially capable of fulfilling their commitments, hence their concentration on so-called prime risks. Like other formal financial institutions, rural banks rely on the borrower's observable characteristics such as the size of land area owned, collateral holdings other than agricultural lands, education, income, etc. It is not therefore surprising that based on the CBS survey, the principal borrowers were commercial, industrial and military clients with average annual incomes of 82,000 pesos, more than three times the poverty line income¹⁹ (Table 13).

Within the sub-group of borrowers who are "prime-risks", the rural banks rely on the clientele's reputation or "character" in credit rationing. In fact, this ranks highest in the list of factors that are considered in loan approval. Reputation refers to the borrower's standing in the community as well as his/her personal relationship with the lender, whether based on existing familial or kinship ties and/or repeated dealings. Table 14 shows that RBs exhibit a strong bias towards a well-developed bank-client relationship in their rationing behavior compared to commercial banks as indicated by the high ratio of repeat borrowers among those who were granted loans²⁰.

Despite the bankability of their clientele in terms of character, collateral requirement and a variety of borrower repayment incentive schemes adopted by 72% of the sample rural banks (Table 15), the average past due ratio of rural banks for the year 1990 reached 31.2% compared to 11.7% of commercial banks and 18.3% of specialized government banks.²¹ Around 73% of the sample rural banks have arrearages. Only 4% of the banks responded to the problem of arrearages by improving collection procedure, while another 8% took action on foreclosure and on liquidity conversion of acquired assets.

2. Informal-Lenders' Incentive Structures

Most informal lenders on the other hand, are able to avoid high default rates as confirmed by several micro-level studies on informal lending (Geron 1988, Agabin 1989, Floro and Yotopoulos 1991). Although both rural banks and informal lenders make use of existing personal and market relations for acquiring knowledge about potential borrowers, the latter find it in their interest to evolve effective borrower incentive schemes. These schemes include interlinkage of transactions, credit-layering and a whole set of loan conditions from the timing of loan release to loan collection schedule in the case of farmer-lenders and trader-lenders (Figure 4). The iterated dealings which build personal ties and feelings of mutual obligation also prevent any defection from terms of the loan and avoid shirking.

Trader-lenders, farmers and landlords prefer lending to their client-farmers and/or to farmers with whom they directly or indirectly (via a third party guarantee) have personal ties. This borrower sorting rule not only enhances operational efficiency, but also provides for better assessment of credit risks and collection, and lessens the cost associated with information gathering and administration costs. Moreover, it builds upon existing social relations that allow for effective enforcement. The various types of personal ties that exist between informal lenders and their borrowers are shown in Table 7.

Unlike rural banks, informal lenders are willing to accept a variety of collateral substitutes particularly the required sale of output. The 1988 RICM survey shows that 53% and 100% of middleman and ricemiller loans, respectively, stipulated such condition (Esguerra 1989). For traders, providing credit to farmers helps assure them of stable supplies and allows for reaping marketing returns to scale. On the other hand, the farmer-borrowers believe that access to credit in the next cropping season depends upon establishing their reputation as reliable palay suppliers to their trader-creditors (Esguerra 1989).

Credit layering is another mechanism employed by informal lenders to maintain their advantaged position. The multi-level network of rice trading incorporates a parallel vertical network of credit extension. Geron 1988, for example, observed that ricemillers/wholesalers are principal sources of cash advances for trader-middlemen agents who then lend to farmer-borrowers. The practice of credit layering leads to a more complex set of incentive structures since there are now more intermediaries between the savers and users of loanable funds.

The terms and conditions of the loan further reflect the informal-lenders' strong motivation to avoid default. Consequences of loan defaults are well communicated and enforced. Timing of loan disbursement and collection are carefully chosen to minimize the probability of non-repayment (Figure 3).

For example, trader-lender loans tend to be incurred at the beginning of the planting season. This arrangement fits well into the cash flow pattern of farming households, which is marked by seasonality. Loan collection, on the other hand, is made to coincide with the harvest. By advancing the loan at the beginning of the production period and collecting the amount due

through in-kind surrender of output, the trader gains a clear edge over other types of lenders. He has the advantage of observing the status of a greater number of variables and can thus fine-tune the conditions of loan payment.

Differential observability exists as the informal lender jointly maximizes from his principal economic activity, say trading and lending. This leads to fragmentation of the credit market which gives rise to economic rent (Floro and Yotopoulos 1991). As noted earlier, government regulation and control are not the only source of economic rent even though this is emphasized in the traditional "rent-seeking economy" literature. Market imperfections and market failure also give rise to economic rent and as such they precede regulation (Yotopoulos 1995). Economic rent may be captured by the informal lenders in several ways. For ricemillers and wholesalers, rent may take the form of high trading profits resulting from increasing returns to an expanded share of the output market. For trader-middlemen, rent can be captured through underpricing of the farmer's output. For landlords and rich farmers, it takes the form of accessing land usufruct rights or labor service which could otherwise be cumbersome and costly in a pure land or labor market transaction.

Some rent approximation through output underpricing by trader lenders is made several studies using various estimation techniques and is quite illuminating. Geron (1988) shows that most of the lenders employed a particular loan pricing scheme that entails a return in both the credit and output markets.²² She showed that among trader-lenders underpricing of farmers' output is prevalent. When compared to the average market price during the year, her results showed that underpricing was higher among lenders involved in the trading of palay.²³ Gains from linked credit-output market contracts were also estimated by Floro and Yotopoulos (1991) by computing the implicit returns to moneylending. The effect of credit on traders' profits includes not only nominal interest charges but also the underpricing (below market prices) of the farmers' output (or overpricing of input if the trader is also an input dealer).

Bautista 1990 applied similar estimation methods using the 1989 RICM data and found that most trader-lender loans (44.51%) has season interest rate of 26-30% for the average duration of the loan period, 3 months. Another 22% of the trader-lender loans had zero interest rate although half of the reported zero interest rates were found to have implicit charges in the form of underpricing. Taking into account the implicit charges on fully paid loans, Bautista found that effective monthly interest rates of trader-middlemen loans tend to be higher than the nominal interest rates usually stipulated in a credit agreement.

3. Land Bank Incentive Structure

The existence of the Land Bank rests upon its administrators' ability to provide some measurable indicators of its outreach and financial success. Its credibility to the legislators and foreign donors is determined by a good loan collection rate to prove its financial viability and broad outreach. There is strong motivation for LBP officials to evolve incentive structures and organizational set-up that fulfill such conditions.

In its effort to reduce the prohibitive information and other transaction costs of lending, LBP has undertaken other measures such as a more decentralized organizational structure. The wholesale lending scheme of the Land Bank parallels the vertical credit-layering practice of trader-lenders. Given this organizational set-up of the Land Bank, the type of incentive structures becomes complex and multi-layered. Fund sources, namely the public (taxpayers) and foreign donors for example, entrust their funds to the government and LBP officials who in turn, delegates the duties of information gathering, loan monitoring, and loan collection to a staff, dealing directly with cooperatives who then screen, allocate and collect from the final users, namely the farmer-borrowers. The terms of employment and procedural guidelines of the bank clerks, loan appraisers, and cooperative officers are also part of the complex set of incentive structures. LBP employs various incentive schemes including promotion, salary bonus and awards to its staff to encourage more effective loan collection effort. The World Bank (1991) study measures staff efficiency in terms of the growth in the "output" per employee -- that is, the number of financial beneficiaries and volume of loans extended per employee -- and found this to have increased.

The collection rates by type of borrower for the years 1987-89 are presented in Table 10. LBP's collection performance on its new wholesale lending and lending to individual farmers seems to be quite satisfactory with current recovery rate of 93% in 1990. It should be noted, however, that the high collection rates are partially due to the Philippine Crop Insurance Corporation default coverage for certain crop loans. The leniency of LBP in loan rollover or loan restructuring also helps explain the relatively high collection rates especially among cooperatives. By and large, the improvement in repayment rates can be attributed to the wholesale lending practice to well-established cooperatives which is confirmed by the author's visits in the LBP field operation areas.

The LBP's thrust in rapid cooperatives formation, however, brings about the possibility of undermining the long-term viability of these cooperatives and consequently that of LBP. Approximately three quarters of LBP's borrower cooperatives were registered after 1988 and hence are at a very early stage of institutional development. The World Bank assessed that the level of equity of these cooperatives is very low (World Bank 1991). In fact, the amount of loans released to cooperatives is about eight times higher than the cooperatives' level of equity. Without careful monitoring, there is a real danger that the cooperatives become dependent to LBP on fund sourcing and that the leniency in loan restructuring creates a disincentive to their collection effort.

LBP's lending to cooperatives carries a low annual interest rate (14%) compared to the rate of inflation that ranged from 9.7% to 13.1% between 1988 and 1990. The program provides mainly short-term production loans (about 97% of the total volume in 1989) which are released in a staggered way according to the specific crop's requirements and repaid at harvest. The cooperatives' access to cheap government funds may lead to another form of rent-seeking i.e., usurpation of this privilege for the coop officials' own interests unless appropriate safeguards and checks are put in place.

C. System of Accountability in Philippine Financial Institutions

The system of accountability that predominates over the rural formal financial institution largely involves government regulation. Savings mobilization is a powerful means of enhancing credit capacity by providing a supply of loanable funds to deposit-taking institutions. But it also increases the risk of confidence decline and thus the externalities involved when rural financial institutions fail. Bank management and performance therefore are not only a concern of its board of directors and/or owners, but that of the government as well. Government regulation of public financial institutions is important as well to safeguard and protect taxpayers' interests as well as donor agencies.

Prudential regulations thus become the key elements to ensure the protection of depositors (savers) and the stability and soundness of the financial system. These include a full range of enforcement powers to deal with incompetent or abusive management, including the ability to remove management or directors, fines and penalties for criminal acts and violations of specific statutes, the right to suspend or restrict dividend payments and so on.

During the 1980's, the Philippine government introduced financial deregulation policies such as interest rate liberalization and greater reliance on market mechanisms. Nonetheless, restrictive regulations were imposed particularly after the rash of rural bank failures in the mid-80's. Between 1981 and 1985, the Central Bank closed a total of 119 banks, 88 of which were rural banks (Lamberte and Relampagos 1990, p. 65). In response to this, the government implemented the Rural Bank Rehabilitation Program in 1987 which included a capital build-up and conversion of arrearages into paid-in capital of the government in the form of stock shares issued in the name of the Land Bank of the Philippines. Still the prudent laws imposed by the main regulatory agency namely the Central Bank provides the check and balance to the system.

A recent assessment of the regulatory policies of the Central Bank of the Philippines indicates the need to strengthen its efforts to reduce insider abuse or fraud (Lamberte and Relampagos 1990). The practice of connected lending has become quite common particularly in the case of interlocking directorate of banks, firms and even public/government agency. Philippine banking regulations also suffer from the lack of effective implementation of stringent penalties including the removal of management or directors, the imposition of fines and penalties for criminal acts and violations of specific statutes, the right to suspend or restrict dividend payments and so on. Prudential regulations therefore seems to be inadequate in providing the necessary system of accountability especially if they are not effectively enforced.

Supervisory problems may also be rooted in political interference and/or a lack of political will on the part of the state to deal with problems such as perverse incentive structures within the regulatory agencies, inadequate compensation, etc. The lack of an effective legal enforcement system in developing countries together with low levels of salaries received by the enforcement agents may yield little results and in fact can lead to further corruption and bribery.

Given the difficulties of relying upon the government and its statutes to provide check and balance, other forms of accountability and checks are thus necessary. Internal pressure for instance is used by the Land Bank in the form of internal competition among the staff for

performance awards and among the various branches of the Land Bank of the Philippines as well. Both rural banks as well as the Land Bank do not undergo any form of external audit, however. Although subject to the supervision of the Central Bank, these financial institutions have yet to develop some stringent accountability system and feedback processes that involve either an independent auditing agency or the depositors/donors.

The question of accountability becomes somewhat more perplexed in the case of non-deposit taking, non-regulated informal financial intermediaries. It is worth noting though that informal lenders in the Philippines often perceive government policy as entailing certain advantages, according to some studies (Agabin 1988, Ghaté 1992). The practice of "regulatory opportunism" as opposed to the formal financial institutions' practice of "regulatory avoidance" is illustrated for instance in the number of moneylenders registering with the Central Bank as "lending investors", yet maintaining their status as informal lenders. (Agabin 1988). Presumably this makes it easier for them to borrow more from the banks.

The issue of competition has also been foremost in discussions of informal sector performance. Market competition is perceived in a way as a sufficient check on the actions of opportunistic individuals including informal lenders. It imposes a discipline that results in a higher level of allocative efficiency. In recent years, a few studies, notably that of Aleem 1993 and Hoff and Stiglitz 1990, have addressed the issue of competition with regard to small farmers and landless workers. Hoff and Stiglitz (1990) in particular, suggests a model of monopolistic competition to explain the high levels of interest rates. Floro and Yotopoulos 1991, however, points out that as a result of market fragmentation and because poor households, e.g. small farmers and landless workers, have much fewer options with respect to credit sources than wealthier households, they are likely to face a less competitive environment than the latter. Heterogeneous borrower-clientele are bound to face different degrees of competition in a given credit market. The question one can raise is: Are there other means by which credit are allocated to the poor segments of the rural population with little or no rent extraction taking place? This is of course a particularly difficult dilemma and one that poses a challenge to both policymakers and lenders alike.

The use of socially-imposed codes of behavior in constraining the opportunistic behaviors of lenders as well as that of borrowers is one possible solution that comes to mind. This is evident for example, in the various types of social mechanisms that were adopted by successful financial institutions such as the rotating savings and credit associations (ROSCAS) and the PAIDCOR arrangement between a rural bank and self-help groups in the Philippines, the Badan Kredit Kecamatan (BKK) of Indonesia and the Bank for Agriculture and Agricultural Cooperatives (BAAC) in Thailand. There are also many examples of financial institutions spearheaded by altruistic individuals that are financially viable such as the Grameen Bank. Social objectives and financial self-sustainability are not necessarily conflicting sets of motives.

Additionally, the role of voice increases with the importance of financial services for the poor borrowers. In those rural communities in which popular participation of community groups and grass-roots organizations are well-organized and effective, voice could play a potentially large

role in ensuring adequate performance of a financial institution. Accountability and the role of pressures from clients/community which it serves are important in influencing the effectiveness of institutions and in dealing with central government and regulatory agencies from a position of greater strength. The issue of client pressure on financial institutions still remains to be studied however.

IV. Summary and Conclusions

An institutional analysis of the determinants of incentive structures, as argued in this paper, provides the micro-foundation for understanding the performance of the rural financial sector. Institutional analysis incorporates the discussion of human motives and the rules of behavior that get to be designed and adopted by the actors into the evaluation of allocative efficiency and distributional impact of rural financial institutions. Incentive structures influence the behavior of market agents. They can exert pressure on agents for higher or lower levels of performance. The important policy issue is that incentive structures can be directly influenced or modified so as to strengthen the incentives they provide.

This paper examines the particular nature of incentive structures adopted by different rural financial intermediaries and the influence that the following institutional elements namely: a) the particular motivation(s) and constraints of the lenders, b) the pertinent attributes of the environment as well as c) the existence (or lack thereof) of a system of accountability and checks have on their design. More specifically, a spectrum of motivations ranging from rent-seeking to altruistic motives define the particular maximizing objectives of lenders. Lenders make choices about borrowers, loan terms, and enforcement mechanisms based on the gainful opportunities presented by the prevailing environment as well

The application of the institutional analysis to understanding the performance of rural financial institutions in the Philippines namely the rural banks, informal-lenders and government-owned Land Bank of the Philippines is made in the second section of this paper. The study findings suggest that these different lenders' ability to effectively perform financial intermediation is largely influenced by the gainful opportunities as well as constraints posed by certain environment attributes such as the extent of development of market infrastructure (or lack thereof), exposure to government regulations and concesssionary funds, the pattern of ownership and resource distribution as well as existing social and cultural norms.

The relatively poor performance of rural banks in loan collection for instance, tends to be attributed to government regulation. Past credit programs have indeed created a dependent nature thereby undermining the potential management capacity of the banks. Such an explanation however does not take into account the nature of the institutional elements that define and shape the incentive structures. An assessment of the underlying motivations as well as the environmental context in which rural banking institutions operate is important in understanding why such government policy is bound to be ineffective and why it tends to reinforce rent-seeking behavior of some rural banks. Regulation influences incentive structures by modifying the

constraints and opportunities faced by individual actors. In this case, credit subsidies enhanced the gains for some rural bankers either by capturing the subsidies themselves or through the use of this special access for political ambition.²⁴

Rent-seeking by informal lenders and public officials can arise as well from opportunities provided by market incompleteness and from the lender-agents' respective economic position. The importance of personalized exchange in rural credit transactions and the high entry costs that emanate from the nature of personal relationship-building gives rise to economic and non-economic rent. Unless government policy addresses the issue of accountability and seeks to establish as well as enforce prudential regulatory measures, credit delivery agents are likely to operate on the basis of their own interest which may or may not promote functional efficiency and socially desirable allocation of credit. The primary concern in the design of incentive structures is to ensure that the financial institution achieves its objectives as a principal (i.e. get creditworthy borrowers to repay the loan). But as pointed out in the first section of this paper, the role of the financial intermediary as an agent (i.e. as repository of funds of savers) requires a procedural set of checks and balances to ensure that the behavior of the intermediary does not undermine the interest of the savers. The important operational issue here is that incentive structures can be directly influenced or modified by a system of accountability. The latter reduces the areas of discretionary behavior for financial agents and imposes a disciplinary mechanism.

The paper also addresses the issue of altruism in public financial institutions. Using the Land Bank of the Philippines as a case in point, the study examines how a government-imposed social objective on a rural financial institution may create problems particularly with respect to financial viability. The Land Bank's innovative attempt to circumvent these potential problems via wholesale lending and other incentive schemes does raise the possibility of combining altruism with efficiency objectives. The success of such an endeavor depends however on skilful institution-building in terms of balancing the two objectives altogether. It requires a system of accountability and incentive structure that constrain the opportunistic behavior of lenders and borrowers and that encourage the use of other facets of human interaction such as cooperation, social sanctions, etc.

Although government policies cannot completely alter the subjective motivations of lenders, they can influence the constraints and in particular, the objectives of intermediaries. Policy reforms that reduce rent-seeking activities in the form of government concessions are important in this regard. On a more challenging note, government intervention can alter the environmental setting, particularly the attributes that create market fragmentation and market incompleteness including land redistribution, definition and enforcement of property rights, improvements in the legal system, better communication and information networks, etc. Such changes would likely lead to a modification of the lenders' objectives and constraints. Likewise, the creditworthiness of small borrowers is significantly improved and the problem of Hobbesian malfeasance can be substantially reduced.

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2. For example, large hierarchically organized banks face increased monitoring and enforcement costs and need to create proper incentives for staff members. Individual informal lenders on the other hand, incur almost negligible coordination costs by engaging in vertical credit-layering or by limiting their clientele to those they can personally manage.

4. The development impact of credit outreach to disadvantaged groups, in the case of say the Grameen Bank in Bangladesh or SEWA (Self-Employed Women's Association) of India, is over and above the importance of increasing rural incomes for a minimum social safety net.

5. That is why credit information networks are set up in developed economies and in more commercialized urban centers in LDCs. These information systems not only help reduce the cost of obtaining information, but also give rise to economies of scale in accumulating and assessing massive data.

6. As of June 30, 1990, there are 814 rural banks that operate in the Philippines.

7. The CBS survey was jointly sponsored by the Philippine Institute for Development Studies, the Ohio State University, and the Agricultural Credit Policy Council.

8. The 65 banks included 22 rural banks, 16 private development banks, and 27 branches of four commercial banks. These were sampled in the provinces of Batangas, Camarines Sur, Iloilo, Laguna, Negros Oriental, Nueva Ecija and Pangasinan using a random sampling process.

9. In the 1987 CBS survey, 73% of the 22 sample rural banks reported that a single family controlled the shares of the bank.

10. No corresponding disadvantages of holding other businesses were reported in the survey.

11. One example is the Rural Bank of Pototan in the province of Iloilo. Established in 1958 as a family corporation, it was one of the recipients of Masagana-99 funds. But rather than channelling these to small borrowers with good credit standing, the funds were distributed by the bank president to his political constituents when he ran in the local elections. Arrearages reached 40%

by 1983, when the Central Bank was forced to suspend the bank's access to rediscounting window.

12. None of the total 1,005 credit transactions in the sugar-growing areas of Batangas province was funded by the formal financial institutions at all. Coconut farmers and farmworkers of the province of Laguna and Quezon borrowed more than 90% of their loans from informal sources. In the rice growing study areas in Nueva Ecija, only 21 formal loan transactions with the banks took place out of a total of 593.

13. The dominant role of landlords as loan-origiators is due as much to the existing production relations as to the limited non-farm income opportunities in the area. The agroclimactic conditions tend to be generally unfavorable to intercropping of other highly valued crops as practiced in most coconut farms (Bautista 1991, p. 19).

14. Several studies such as Geron 1988, Floro and Yotopoulos 1991 also confirmed that the informal credit market is largely served by paddy rice traders, millers and input dealers.

15. The majority (68%) of the informal lenders in the RICM study of the rice-growing villages reported farming as one of their major sources of income. In a separate survey, Geron (1988) also reported that a majority of farmer-lenders in rice and coconut-based villages link credit with trading. Agabin (1988) also observes that after the decline in credit subsidy programs in the 1980s, rich farmers who had combined farming and trading activities became quite active in the credit circuit.

16. These enforcement mechanisms can be temporary, however. That is, the lender's influence over the borrower is only for the duration of the loan period.

17. Despite this mandate, however, total lending for agrarian reform activities accounted for only about 9% of LBP total assets, or about 21% of its gross loan portfolio by the end of 1990. (World Bank 1991 p. 13)

18. This figure is based on the estimation of the Agricultural Credit Policy Council Monitoring Unit.

19. The latter tend to have an "arms-length" relationship with their branch staff as manifested in formal management policies.

20. Commercial clients consisted mainly of businessmen/traders. Industrial clients consisted mainly of small and medium enterprises, rice millers, and contractors. It could not be verified from the survey data whether inside lending occurred.

21. The results obtained from the CBS survey are corroborated by the findings of Llanto and Dingcong (1992) who used 344 bank client data from the 1989 Financial Intermediation survey. The degree of loan rationing as measured by the ratio of loans granted to loans requested is minimal for all borrowers of RBs (Llanto and Dingcong 1992).

22. This is based on the unpublished monitoring data of the Agricultural Credit Policy Council.

23. This explains why price trader-lenders have a higher price margin compared to copra or coconut trader-lenders. It is interesting to note that farmer-lenders in the Geron sample make up half of the paddy rice traders who employ loan pricing schemes disadvantageous to the farmers (Geron 1988, p. 66).

24. This is explained by the difference in the production cycle of the two commodities. Paddy rice has a longer production cycle than coconut, resulting in a higher opportunity costs of money among palay trader-lenders compared to coconut trader-lenders. Moreover, copra prices are more volatile (dependent on the world market price) compared to paddy rice prices. This prompts copra traders to engage in price speculation from which they are able to earn huge profits. They are primarily interested in having large volume of copra stored in their warehouses which they can sell when prices increase substantially (Geron 1988 p. 66).

27. The existence of paternalism and inside lending in the Philippine banking system seems to be prevalent not only among the small family-unit rural banks but also among the big commercial banks that tend to dominate the banking sector (Tan 1990). The pervasiveness of interlocking directorates and the close interlinking among big business, the financial sector, and the state created a triple alliance whose interests dominate major loan and investment decisions, thus favoring certain types of borrowers over others (Floro and Yotopoulos 1991, p. 44).

Table 1: LOANS GRANTED BY FORMAL FINANCIAL BANKING SYSTEM TO THE AGRICULTURAL SECTOR, 1981 - 1990 (in Billion Pesos)

Year	Agricultural Loans	Total Loans	Share of Agricultural (%)
1981	25.725	275.817	9.3
1982	28.443	304.513	9.3
1983	29.294	365.005	8.0
1984	30.271	366.434	8.3
1985	28.355	287.985	9.8
1986	22.589	298.580	7.6
1987	27.460	404.352	6.8
1988	32.663	480.496	6.8
1989	31.514	474.065	6.6
1990	36.276	583.286	6.2

Sources: Central Bank Statistical Bulletin, various years (for 1981-1986).
Central Bank Department of Economic Research (for 1987-1990).

Table 2: PROPORTION OF LAND BANK AND RURAL BANK RESOURCE
BASE TO THE BANKING SECTOR
AS OF DECEMBER 31, 1990
(in Million Pesos)

Item	Philippine Banking Sector	Land Bank Amount	Percent of Total	Rural Banks Amount	Percent of Total
Assets	592,023	22,823	3.8	13,459	2.3
Loan Portfolio	290,563	9,686 a/	3.3	9,325	3.2
Deposits	359,017	8,257	2.3	7,010	2.0
Borrowings	61,137	1,653 b/	2.7	2,525	4.1
Networth	74,231	6,293	8.5	2,280	3.1

a/ Includes land amortization receivables and other loans of the Bank.

b/ Includes bonds payable and bills payable.

Source of data: Central Bank (1990a).
Central Bank (1990b).

Table 3 : SUMMARY OF STUDIES INDICATING EXTENT OF BORROWING
FROM FORMAL AND INFORMAL SOURCES ^{a/}
(In % of Total Number of Loans or Borrowers)

Period Covered	Author/Year of Publication or Release	Number of Loans/ Borrower-Respond.	Credit Source (%)		
			Formal	Informal	Mixed
1954-55	de Guzman (1957)	2,411 loans	12.0	88.0	
1957-58	Gapud (1958)	256 loans	10.0	90.0	
1957-58	Sacay (1961)	916 loans	13.0	87.0	
1960-61	BCS (1963)	1,679,000 loans	7.8	92.2	
1967-70	Mangahas (1975)	151 borrowers	11.9	88.1	
1970-71	Mangahas (1975)	297 borrowers	20.9	79.1	
1969-70	Almario (1970)	138 loans	37.7	62.3	
1969-70	Balagot (1974)	134 borrowers	21.6	78.4	
1974	Cigaral (1977)	421 borrowers	94.0	6.0	
1976	DA (1976)	268 farmers	17.2	82.8	
1977	UPBRF (1977)	1,079 loans	36.9	63.1	
1977	DA (1977)	405 farmers	5.2	94.8	
1977	TBAC (1978)	656 borrowers	25.8	74.2	
1977-78	Lopao & LaTorre (1979)	41 Fishermen	29.3	70.7	
1978	DA (1978)	338 farmers	3.8	96.2	
1978	TBAC (1981)	2,110 loans	17.4	82.6	
1979-80	NIA-SGV (1980)	299 farmers	20.0	80.0	
1980	Capistrano (1982)	41 Households	2.1 _{c/}	97.9 _{c/}	
1981-82	TBAC (1986)	871,600 loans	40.2	59.8	
		626,300 farmers	34.0	57.8	7.3
1983-84	Floro and Yotopoulos (1991)	111 farm households _{d/}	2.9	97.1	
		448 loans	8.0	92.0	
1985	NEDA (1987)	381,400 _{e/}	20.7	79.3	
1986	Ateneo-Social Weather Stations	9.583 M persons of voting age	32.1	64.9	3.0

1987	-do-	10.322 M persons of voting age	28.4	65.7	5.9
1987	Geron (1988)	1,790 farmer- borrowers	3.0	97.0	

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- a/ Data comparability is limited by differences in sampling.
- b/ Samples were drawn from list of borrowers of banks which explains the high percentage of loans from the social sector.
- c/ Out of 48 responses. Some borrowers had more than one source of credit.
- d/ The respondents were all borrowers.
- e/ Borrowers-repondents availed of credit anytime from 1975 to 1985.

Source: Agabin et. al. (1989).

Table 4 TYPE OF OTHER BUSINESSES OF MAJOR STOCKHOLDERS
IN RURAL BANKS

Business Activity	Number of Bank Respondents a/	% Distribution
1. Business, Commerce and Real Estate	15	34.1
2. Other Financial Institutions	13	29.5
3. Landownership	6	13.6
4. Other Professions (Medical, etc.)	5	11.4
5. Agricultural Trading	3	6.8
6. None	2	4.5
Total	44	100.0

a/ Some banks have multiple responses.

Source: Comparative Bank Study Survey, 1987.

Table 5. INFORMAL LENDERS IN RICE-GROWING STUDY AREAS
BY TYPE OF LENDER

Lender Type	Number of Lenders	Number of Transactions	Average Loan Size (Pesos)
Farmer/Landowner	48	175	1,292.92
Private Moneylender	6	83	1,303.34
Trader/Middlemen	14	175	1,610.61
Rice Miller	2	7	6,900.00
Retail Store Owner	7	52	1,957.69
Input Dealer	4	14	917.68
Others ^{a/}	34	50	1,285.02
TOTAL	115	556	

^{a/} Includes guarantors, government employees (particularly public school teachers) and other very specific occupations.

Source: RICM Survey (1988).

Table 6. SELECTED VARIABLES FOR BORROWER RICE HOUSEHOLDS, 1988

Variables	Total Sample	Farm Households	Landless Households	Non-Farm Households
Household Size	5.4 (2.02)	5.3 (2.07)	6.0 (2.09)	4.6 (1.15)
Number of Dependents	4.1 (1.94)	4.0 (2.00)	4.7 (2.02)	3.6 (0.96)
No. of off-farm/Non-farm Income Sources	2.2 (0.87)	2.2 (0.85)	2.1 (0.88)	2.4 (0.95)
Total off-farm/ Non-farm Income (P)	17434.23 (20136.87)	16789.09 (15981.11)	13123.54 (9398.11)	31706.04 (42726.86)
Household Income (P)	25800.63 (30206.66)	32244.19 (32936.74)	13123.54 (9398.11)	31706.04 (42726.86)
Cash Loans (P)	5742.89 (7569.3)	8030.05 (8614.36)	2022.08 (1749.52)	3054.38 (6143)
In-Kind Loans (P)	2671.89 (5729.16)	1659.03 (7489.63)	1365.93 (896.3)	882.50 (24.75)
Total Borrowings (P)	7675.55 (10469.09)	10909.43 (12316.06)	2968.22 (2156.82)	3164.69 (6114.51)
Average Loan Size (P)	1954.94 (2397.02)	2648.69 (2819.02)	1012.74 (808.11)	813.88 (1326.43)
No. of Loans	4.3 (3.34)	4.8 (3.82)	3.4 (1.79)	3.7 (3.43)
No. of Lenders	1.7 (1.05)	1.9 (1.22)	1.3 (0.61)	1.4 (0.63)

* Standard deviations are in parentheses.

Source: RICM Survey (1988). Cited in Esguerra (1989).

Table 7. NUMBER AND PROPORTION OF LOAN TRANSACTIONS IN RICE-GROWING STUDY AREAS
BY LENDER TYPE AND BORROWER'S RELATION TO LENDER a/

Lender-Type	Personal Ties		Tenant		Regular With Customer in a Related Business		Third Party Connection/ Guarantee		Hired Laborer		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Bank	0	0	0	0	0	0	1	0	0	0	1	0
Farmer/ Landowner 35	107	43	4	67	0	0	17	17	37	62	165	
Private Moneylender	25	10	0	0	0	0	18	17	6	10	49	10
Trader-Lender Middlemen & Commission Agents	51	21	2	33	34	68	57	55	15	25	159	34
Rice Miller	1	0	0	0	6	12	0	0	0	0	7	1
Input Dealer	8	3	0	0	1	2	0	0	2	3	11	2
Retail Store Owners	24	10	0	0	9	18	7	7	0	0	40	9
Other	32	13	0	0	0	0	3	3	0	0	37	8
Total	248	100	6	100	50	100	100	100	60	100	469	100

a/ There were some borrowers-households who didn't respond to the question.
Percent totals may not exactly equal 100 due to rounding.

Source: RISM Survey (1988)

TABLE 8: TOTAL LOAN PORTFOLIO COMPOSITION OF THE LAND BANK

Year	Loan Portfolio (in P M)	Direct and Indirect Loans to Farmers <u>a/</u> (% Distribution)	Commercial and Other Loans <u>b/</u>
1980	3,706	35.7	64.3
1981	4,292	35.0	65.0
1982	4,230	39.9	60.1
1983	4,693	40.7	59.3
1984	5,143	40.1	59.9
1985	6,742	31.8	68.2
1986	5,789	37.5	62.5
1987	5,784	34.1	65.9
1988	5,980	33.5	66.5
1989 <u>c/</u>	7,491	26.8	73.2
1990 <u>d/</u>	9,686	20.8	79.2
Growth Rates (in %)			
1980-1990			
Nominal	10.1	4.3	12.4
Real	(3.5)	(8.6)	(1.5)

a/ Includes loans directly or indirectly benefitting farmer beneficiaries.

b/ Mostly commercial loans; also includes loans to landowners/bondholders and other loans not identified in Land Bank's annual reports.

c/ The "Report of the President" in the Land Bank's 1989 Annual Report indicate that the total loans outstanding went to the following:

- (i) loans to agriculture and agri-based business undertakings (51%);
- (ii) exposure in livelihood projects outside of Metro Manila (16%);
- (iii) loans to government institutions including local government units (12%); and
- (iv) loans in Metro Manila (21%).

d/ The "Report of the President" for 1990 reports the following loan portfolio distribution:

- (i) small farmers (46%);
- (ii) agri-related industries (23%);
- (iii) livelihood projects (8%); and
- (iv) other income-generating projects by the government (9%); other entities in Metro Manila (7%); and outside Metro Manila (7%).

Source: Land Bank Reports. Various Years

TABLE 9: LOANS EXTENDED BY LAND BANK TO SMALL FARMERS
 BY TYPE OF BORROWER
 (Loans in Millions of Pesos)a/

	<u>Volume of Activity, 1990</u>				<u>Loans per Individual Farmer</u>		
	No. of Farmers	%	Loans	%	1989	1990	1990/1989
Direct Lending							
Individuals	37,746	18	303.3	17	6,938	7,513	1.08
Indirect Lending							
Cooperatives	133,135	64	1,082	60	5,633	7,038	1.25
Rural Banks	36,428	18	420.8	23	10,511	10,950	1.04
TOTAL	207,309	100%	1,806	100%	23,082	25,501	1.10

a/ Loans refer to those released January 1 - September 30 each year.

Source: World Bank (1991)

TABLE 10: COLLECTION RATES OF THE LAND BANK BY TYPE OF BORROWER
 (As of December 31 of each year)

	Direct Lending	Indirect Lending	
	Individuals	Cooperatives	Rural Banks
1987	90%		
1988	89%	100%	100%
1989	89%	93%	98%

Source: World Bank (1991)

Table 11: BRANCH MANAGER'S DISCRETIONARY AUTHORITY ON LOANS
BY TYPE OF BANK

	BANK TYPE	
	Rural Bank	Commercial Bank
Average Branch Manager's Lending Limit	₱ 8,667	₱651,667
Average Loan Size	₱11,127	₱ 93,529

Source: Comparative Bank Survey (1987).

Table 12: LOAN ADMINISTRATION OF RURAL INSTITUTIONS, BY BANK TYPE

		BANK TYPE	
		Number of Rural Banks	Number of Commercial Banks
1.	<u>Loan Policies</u>		
	a) With Formal/Written Policies	14	21
	b) No Written Policies	7	2
2.	<u>Major Competitor for Loans</u>		
	a) Rural Banks	8	0
	b) Private Development Banks	2	4
	c) Commercial Bank Branches	4	21
	d) Other Lender Types	2	2
3.	<u>Loan Collections</u>		
	a) Incentive to Staff	5	13
	b) No Incentives	17	8
4.	<u>Loan Restructuring</u>		
	a) Written Guidelines	16	18
	b) No Formal Guidelines	6	1

Source: Comparative Bank Study Survey (1987).

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Table 13: TYPES OF MAJOR CLIENT-BORROWERS SERVICED BY RURAL BANKS, 1989

Type of Client-Borrowers		
	No.	% of Distribution
A. Commercial		
Businessmen/Traders	9	41
Merchandise Firm	1	5
B. Industrial		
Small and Medium Enterprises	2	9
C. Agricultural		
Agrarian Reform Beneficiaries	1	5
D. Organizational		
Cooperatives/Farmer Groups	0	0
Rural Financial Institutions	0	0
E. Professional/Service Workers		
Military	8	36
Overseas Workers	1	5
TOTAL	22	100% ^{a/}

^{a/} Percentage total greater than 100 due to rounding.

Source: 1987 Comparative Bank Study Survey (1987).

Table 14: THE RATIO OF THE TOTAL NUMBER OF LOANS GRANTED TO REPEAT BORROWERS TO THE TOTAL NUMBER OF LOAN APPLICATIONS APPROVED IN 1986, BY TYPE OF BANK

Ratio (%)	Type of Bank			
	Commercial Banks		Rural Banks	
	No.	% a/	No.	% b/
0	2	11.8	1	7.7
> 0 - 25	1	5.9	1	7.7
> 25 - 50	5	29.4	0	0
> 50 - 75	4	23.5	1	7.7
> 75 but < 100	1	5.9	7	53.8
100	4	23.5	3	23.1
Total	17	100.0	13	100.0
Mean c/	0.58 (0.33)		0.81 (0.31)	
No answer	10	37.0 ^a	9	40.9 ^b

a/ % of total commercial bank respondents (27)

b/ % of total rural bank respondents (22)

c/ standard deviation in parenthesis

Source of Data: Comparative Bank Survey, 1987.

Table 15. TYPES OF INCENTIVES FOR STAFF AND BORROWERS BY RURAL BANKS

Incentive Type	Number of Respondents	% Distribution
A. Incentives to Staff:		
1. Salary Bonus	4	18
2. Commission Basis	2	9
3. None	16	73
	22	100.0
B. Incentives to Borrowers a/:		
1. Rebates	11	38
2. Access to Future Credit	1	3
3. Discounted Rate in Future Loans	2	6
4. Interest Accrual up to Loan Payment only	5	15
5. Quick Loan Approval	1	3
6. No Incentives	8	28
7. No Response	1	3
	29	100.0

a/ Some banks have multiple responses.

Source: Comparative Bank Study Survey, 1987.

Figure 1
Schematic Diagram of Incentive Structures and Their Impact on Financial Institution Performance

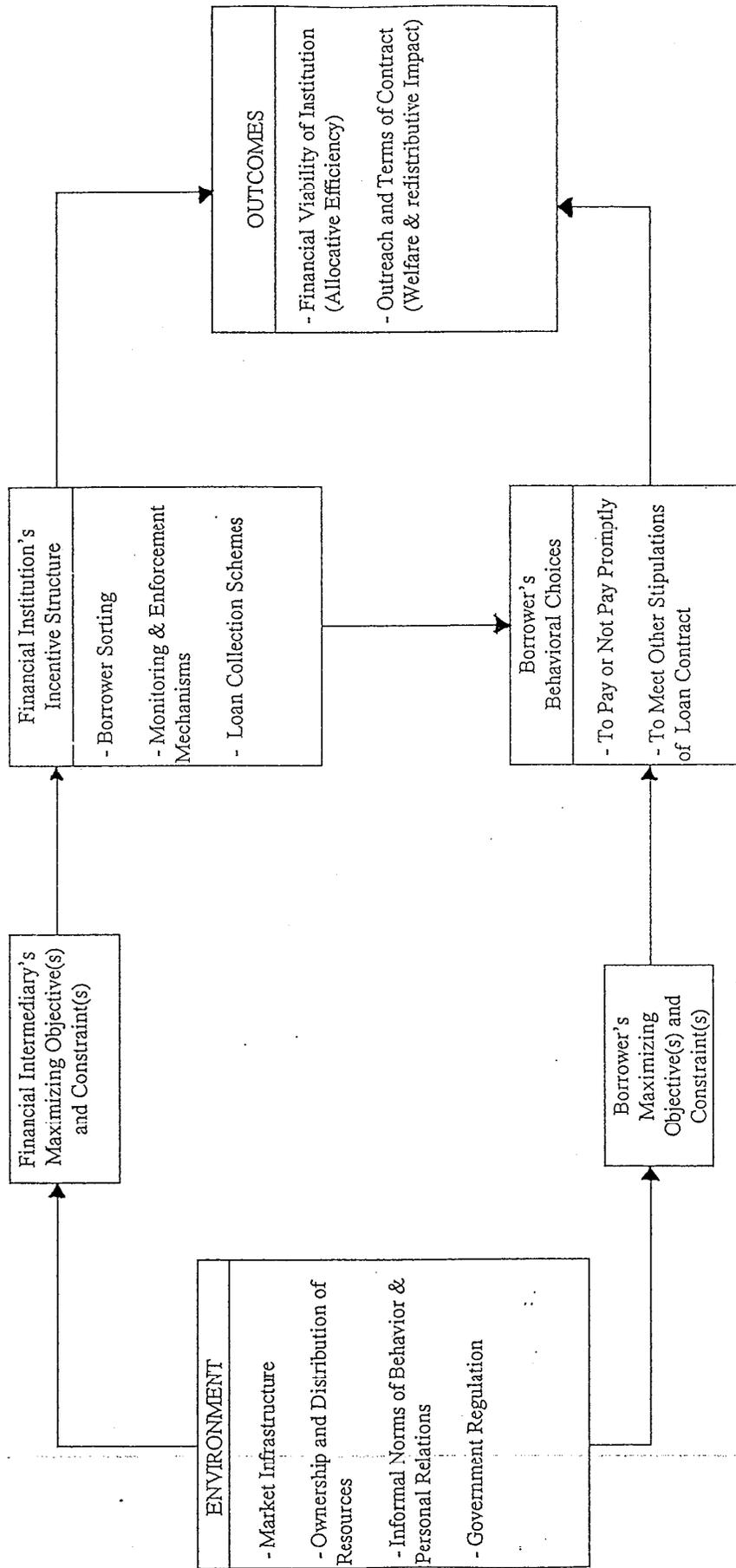
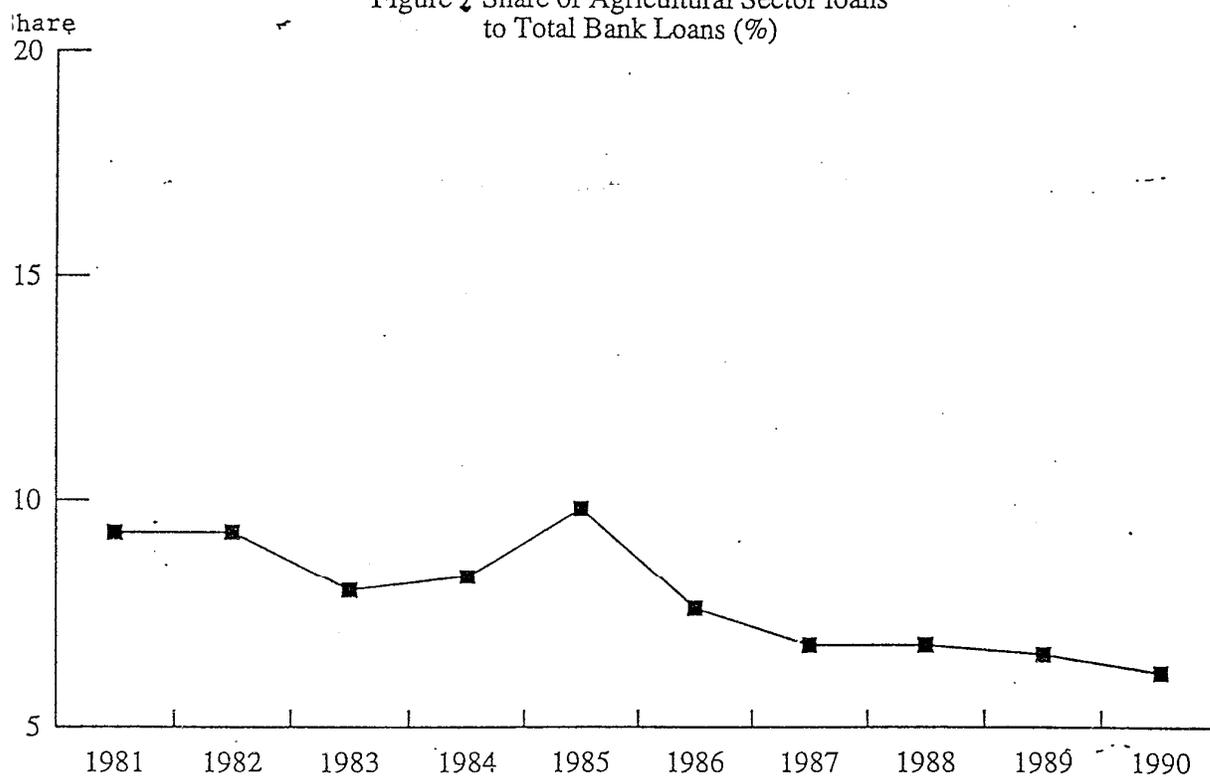


Figure 2 Share of Agricultural Sector loans
to Total Bank Loans (%)



Source: Central Bank Statistical Bulletin, various years (for 1981-1986)
Central Bank Department of Economic Research (for 1987-1990)

Figure 3
Profile of Major Informal Lenders

Characteristics	Trader-Lenders	Farmer-Lenders
1. <u>Linked Activities</u>	Engaged in both: a) buying/selling and b) lending.	Engaged in both: a) producing agricultural output and b) lending.
2. <u>Information Basis</u>		
a) Rich Farmer - Borrower	Regularity in dealing with merchant allows familiarization.	Proximity in the village or close kinship ties allow familiarization.
b) Poor Farmer - Borrower	Irregularity in dealing with merchant.	Proximity in the village or close kinship ties allow familiarization.
3. <u>Credit Terms and Enforcement Rules</u>		
a) Timing of Loan Release	Follows the start of production cycle.	May occur at any part of production cycle.
b) Timing of Loan Payment	Strictly at harvest time.	At harvest time but allows for rollover.
c) Enforcement of Loan Collection	Present at first day of harvest.	Physical proximity and social pressure.
d) Type of Tie-In Arrangements	Output-tied loans and Input-output-tied loans.	Output-tied loans Land-tied loans.
e) Default Consequences	Termination of Credit Line. May allow for rollover in certain cases.	Allow for rollover if defaulted loan is small. Keep land (usufruct rights) collateral if defaulted loan is large.

Source: Floro and Yotopoulos (1991)