ENABLING RURAL AND AGRICULTURAL FINANCE FOR INCLUSIVE DEVELOPMENT IN THE PHILIPPINES

V. BRUCE J. TOLENTINO, PhD, et al.

A PUBLICATION OF THE
DEPARTMENT OF AGRICULTURE
AGRICULTURAL CREDIT POLICY COUNCIL

Book 1 RURAL AND AGRICULTURAL FINANCE AND DEVELOPMENT ISSUES

comprises papers that deal with financial systemwide reform issues that determine the health and development effectiveness of the rural and agriculture finance system

Book 2 THE RURAL BANKS

focuses on the rapid rise and fall of the multitude of small private banks that served as the principal delivery agents of subsidized loans to farming and rural enterprises under the government's Masagana 99 program and related directed credit programs

Book 3 FINANCIAL SECTOR REGULATION FOR RURAL AND AGRICULTURAL DEVELOPMENT

deals with the myriad, multiple, and recurring issues that arise from financial sector regulation. The papers on regulatory issues zero in on specific laws and regulations that influence the workings of the financial market in ways that are either harmful or helpful to development. The papers include suggestions on how the laws/rules/regulations can be modified to improve the working of the banks and other financial market players.

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DEPARTMENT OF AGRICULTURE
1898
ACPC

BOOK 1

Rural and Agricultural Finance and Development Issues

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About the Author

Dr. V. Bruce J. Tolentino is a leading economic development expert with decades of experience in both the public and nonprofit sector locally and abroad.
He served as the ACPC's first executive director from 1987-1989, and currently serves as the Vice Chair of the Council, and member of the Monetary Board of the Bangko Sentral ng Pilipinas.

About DA-ACPC

The Agricultural Credit Policy Council, an attached agency of the Department of Agriculture, is the institution on agri-fishery credit and program development that promotes a sustainable and effective delivery of financial services to the countryside.

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Book 1: Rural and Agricultural Finance and Development Issues

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Preface

Thirty-five years have passed since the Agricultural Credit Policy Council (ACPC) was created in 1986 through Executive Order 113, to replace the Presidential Committee on Agricultural Credit (PCAC) and the Technical Board of Agricultural Credit (TBAC). The move sought to synchronize all credit policies and programs in support of the Department of Agriculture's (DA) priority programs. The ACPC was also given the responsibility of reviewing and evaluating the economic soundness of all ongoing and proposed agricultural credit programs, whether for domestic or foreign funding, prior to approval.

Leading these efforts was Dr. V. Bruce J. Tolentino, who was appointed by then Agriculture Secretary Carlos G. Dominguez III as the Council's first Executive Director.

Today, the ACPC remains the country's premier government institution for program development and research on agri-fishery credit — a feat that would not have been possible without the expertise and dedication of our first Executive Director, whose vision of a sustainable rural finance system for farmers and fisherfolk served as the guiding principle of the Council. This three-part book series puts together in a convenient collection numerous research studies, policy briefs, and statements Dr. Tolentino produced while leading the ACPC.

While some advancements have been made since these papers were originally published, many of Dr. Tolentino's policy

recommendations remain relevant today, decades later: the "One DA" approach emphasizes a holistic transformation of the agriculture and fisheries sector, and the *Bangko Sentral ng Pilipinas* advocates for the financial inclusion of unserved and underserved sectors. It all comes together, as Dr. Tolentino now serves as a member of the Monetary Board and as Vice-Chair representative for the ACPC.

I speak on behalf of my agency when I say we are fortunate to call Dr. Tolentino our mentor and dear friend, and it is our hope that sharing his valuable insights to the world once more in this book series will continue to inspire innovation and reforms toward a healthy rural finance sector with prosperous farmers and fisherfolk.

Jocelyn Alma R. Badiola
Executive Director
Agricultural Credit Policy Council

Foreword

It came as a shock to me when I learned from our rural bankers in 1986 that they do not rely on their communities for deposits. It was easy to imagine that the Rural Banks Act of 1952, a law mandating a bank for every town in the country, would have fostered a close symbiosis with the communities they served. That did not happen, unfortunately, and to this day a major portion of our population remains unbanked.

My acquaintance with banking began in the mid 1960's when I was an Executive Trainee at a foreign bank and in the early 1980's as head of an agricultural development bank. I have cultivated a keen interest in rural banking and the role of finance in modernizing our agriculture. When I served as Secretary of Agriculture, my duties included chairing the Agricultural Credit Policy Council. Among my advocacies at this time was to work with the Central Bank to help strengthen agricultural finance. This led to a joint program between the Central Bank and the Ministry of Agriculture aimed at rationalizing rural banking. A Rural Bank Review and Rationalization Committee was organized.

During a seminar in 1987, I had the good fortune of meeting a young PhD graduate named Bruce Tolentino. When I found out his doctoral dissertation was on Central Bank policy and the rural banks, I asked Bruce to help the Ministry of Agriculture prepare a presentation to the Central Bank on rural banks and agricultural finance. Soon after, as the reform process progressed, I convinced Bruce to serve as the first Executive Director of the then newly established Agricultural Credit Policy Council (ACPC).

Since that time, Bruce and I worked together on many issues. I have always been impressed by his expertise and effectiveness in helping our rural communities. He has the ability of avoiding technical jargon and therefore his ideas reach the broadest audience.

This book series records four decades of Bruce's work in rural finance. I am fortunate to have closely observed this work and I am honored to endorse this book as indispensable to understanding the issues relating to agricultural finance.

Carlos G. Dominguez
Secretary
Department of Finance

Introduction

This book series is a three-volume compilation of papers, reports, and policy notes from close to four decades—a lifetime—of keen interest and hard work focused on the promotion of effective and efficient financial services in support of inclusive rural and agricultural development.

My interest in financial services for poverty alleviation began in my boyhood in Baguio, in Northern Philippines. To keep up with payments for my school tuition, my mother Florence had to turn, more times than she cared for, to the local moneylender. I observed the great pains my mother took to ensure that the moneylender would be paid back to avoid the hefty "5-6" interest charges from piling up. I will never forget that my mother's sacrifices and the financial services rendered by informal moneylenders helped me get through early schooling.

In my twenties, I served as director of the Dansalan College Community Service (DCCS), a school-based rural and agricultural development program in Marawi and Lanao del Sur in Mindanao, Southern Philippines. The DCCS had programs in adult literacy, health and nutrition, agricultural extension, cooperatives development, and handicrafts enterprises.

There were only a few banks in the Lake Lanao area—isolated as the region was, and still is, from the rest of the country by geography and sociocultural barriers. Most financial services were embedded in the operations of suppliers, merchants, and transport entrepreneurs who did business in downtown

Marawi, which is linked to the cities of Iligan and Cagayan de Oro, the urban centers of Northern Mindanao. For financing, farmers and small entrepreneurs were completely dependent on their own savings and those of their families, or on advances from input and service suppliers who extracted payments due at harvest. While the suppliers gave these advances without requiring collateral or much paperwork, the applicable interest was quite hefty, and the threat of zero access to any financing at all in case of default was all too real.

The 1970s and early 1980s were the peak of the Philippine government's *Masagana 99* (Bountiful 99) program, aimed at dramatically raising the productivity of the rice sector and reducing poverty among farmers. The program delivered a package consisting of subsidized loans and technical assistance to farmers. The subsidized loans were financed by international development assistance and delivered through a national network of rural banks—private banks that had been granted virtual monopolies via the "one town, one bank" policy in specific rural municipalities. These were licensed by the Central Bank of the Philippines (CBP), subject to minimal capital and regulatory requirements, and had liberal access to CBP rediscounting.

Masagana 99 was a great success in raising rice sector productivity, principally by getting farmers to adopt new high-yielding seeds and the requisite soil nutrition and pest management technologies. However, the rural banks organized to distribute the subsidized loans became overly dependent on subsidized funding and were unable to generate savings from the public which would be intermediated into loans. Many of the rural banks turned to CBP's rediscount window. As inevitably the subsidies and easy rediscount funds dried up, the dependent rural banks fell into crisis.

The unwinding of the debt and transformation of the rural banks from subsidy-dependent entities to viable, independent intermediaries is a process that begun in the early 1980s and continues until today. I was fascinated and deeply interested in this process, and when an opportunity to enter graduate school and focus on rural finance opened in 1981, I grabbed it. At the University of the Philippines School of Economics and later at the East-West Center at the University of Hawaii, I studied the story of rural banks and wrote my doctoral dissertation on the evolving policy milieu that created the incentives and disincentives that rural banks faced and which shaped their operations, profitability, and contribution to rural and agricultural development.

Upon completion of graduate studies in 1986, I returned to the Philippines with the intent to teach at the then College of Economics of the University of the Philippines Los Baños (UPLB). At the time, UPLB was deeply engaged with the Ministry of Agriculture and Food (MAF), providing policy and technical advice to the new government led by President Corazon Aquino in the wake of the "People Power Revolution" that had just driven the dictator Ferdinand Marcos out of office. But the path to teaching had to wait.

I was asked by then MAF Minister Ramon Mitra and MAF Deputy Minister Carlos Dominguez III to suggest ways in which farmers could obtain more financing from the country's banks. This led to my working closely with the National Agriculture and Fisheries Council (NAFC) and the Technical Board for Agricultural Credit (TBAC), two agencies attached to the Department of Agriculture (DA). The NAFC was the principal implementing arm of the *Masagana 99* program and TBAC had been organized to analyze the program's financing aspects.

Two key measures that the MAF enacted to help enhance financial services for agriculture were, first, the implementation of a fast-track program to rehabilitate the rural banking industry, in partnership with the CBP; and, second, the creation of a new government agency—the Agricultural Credit Policy Council (ACPC)—in 1987. I served as the lead technical advisor for the Rural Bank Rationalization Program and was soon after appointed as the first executive director of the ACPC.

At the ACPC, the idea behind a great deal of my work was that banks should be deeply rooted in the communities they serve. Banks, being private businesses, operate by turning the life savings of individuals or families into loans. These loans are not simply given left and right. In fact, the bank must aggregate the deposits of many depositors to grant just one loan. This way, many depositors trust that the projects the banks lend to are profitable and the borrowers credit-worthy. The banks, therefore, have a dual obligation to (A) keep the money of depositors safe, and (B) lend to credit-worthy borrowers and projects. It was surprising to me that many communities did not make use of their local rural banks, and so a lot of my work has been focused on finding ways to strengthen the rural banking system so that it benefits the underserved and unbanked Filipinos in the agriculture sector.

I worked at the ACPC and concurrently at the Office of the Agriculture Secretary from 1987 to 1993. This early involvement in rural finance and agricultural development continued throughout my career in public service and international consulting. Because of my experience in the Philippines, I later had the opportunity to provide technical assistance on finance and development to various government agencies in Cambodia, Vietnam, Indonesia, Pakistan, Korea, Timor Leste, and Myanmar.

A key insight gleaned from my time in Mindanao, at the ACPC, abroad, and in the Philippines—and which is now clearer than ever from my vantage point at the Monetary Board of the *Bangko Sentral ng Pilipinas* (BSP)—is that cheap and easy credit will not solve all the problems in farming. The fundamentals must be attended to, and those fundamentals include good seeds, the right germplasm, proper irrigation, wise plant management, and, of course, good weather. All of these ingredients enable productive and profitable agriculture, which is necessary for a borrower to be deemed credit-worthy and a project viable for bank financing.

It then means that the many parts of government need to work together to ensure that the agriculture sector is strong and enables food security while assuring stable and dignified incomes for farmers. So, in 2021, again with the guidance of Mr. Dominguez—now Secretary of Finance—I have once more become directly and deeply engaged in policymaking and programming for rural and agricultural finance and the rural banks.

The papers, reports, and memos in this compilation are a record of the challenges, responses, successes, as well as failures in rural finance and intermediation over the course of my career. I am proud that advances have been made on some issues, but many other constraints remain unresolved. Indeed, some issues persist, since the policy and program environment continuously evolves, even as the tools that analysts and reformers work with improve with better knowledge.

Book I, entitled ***Rural and Agricultural Finance and Development Issues***, comprises papers that deal with financial system-wide reform issues that determine the health and development effectiveness of the rural and agriculture finance

system. Attention is also given to the political economy of financial sector reforms and to the delicate balance between rural and agricultural development on one hand and financial sector viability on the other, for the healthy growth of the overall economy.

Book II, or ***The Rural Banks***, focuses on the rapid rise and fall of the multitude of small private banks that served as the principal delivery agents of subsidized loans to farming and rural enterprises under the government's Masagana 99 program and related directed credit programs. Government policy and programs in the 1970s drove the rapid growth of these banks. As these supply-led policies and programs inevitably proved unsustainable, the subsidies and privileges for rural banks dried up. Many rural banks were unable to cope with the changes and closed shop. Some have thrived in a more market-oriented policy environment, taking advantage of their knowledge of the rural and agricultural economy, and still many others are struggling to transform and survive in the current economy.

Book III, or ***Financial Sector Regulation for Rural and Agricultural Development***, deals with the myriad, multiple, and recurring issues that arise from financial sector regulation. Many regulations are well-intentioned, aimed at depressing loan interest rates, directing credit to sectors considered underserved or watering down qualification requirements for obtaining loans and other financial services. Such regulations ignore market realities and incentives and often do not achieve their intended goals. Often, regulations that attempt to constrain market forces end up being at least sustainable and at worst distortionary and a waste of precious public resources. The papers on regulatory issues thus zero in on specific laws and regulations that influence the workings of

the financial market in ways that are either harmful or helpful to development. The papers include suggestions on how the laws/rules/regulations can be modified to improve the working of the banks and other financial market players.

The bulk of the articles included in this compilation could not have been produced had I not had the good fortune of serving at the ACPC and the DA. These agencies enabled the focus and provided the technical and logistical support necessary to produce these works. I thank most especially the staff and officers of the ACPC, whose dedication and skills have continuously and significantly expanded financial services for farmers and fisherfolk.

V. Bruce J. Tolentino, PhD

Book 1:
Rural and Agricultural Finance and Development Issues

CHAPTER 1

Thirty-three facts about Philippine agricultural credit[1]

V. Bruce J. Tolentino[2]

Public interest in government policy and programs in credit, particularly agricultural credit, has remained high since credit policy is popularly (and politically) perceived to be part of the solutions to development and poverty alleviation problems. Much of the discussions about agricultural credit and rural finance, however, has taken place in contexts where information about actual credit conditions is lacking, thus, these are often dominated more by rhetoric rather than fact.

Yet the experiences of the Philippines and some other countries reveal that credit policies and programs, including their manner of implementation over the past two decades, are of doubtful value. Twenty years of subsidized and targeted credit, previously believed to solve development problems, have wasted the scarce resources of the public, engendered

[1] This paper is an edited and expanded version of "Thirty-three Facts About Philippine Agricultural Credit," Staff Paper 87-02, Agricultural Credit Policy Council (ACPC), 1987. The comments and suggestions of Dr. Dale Adams of the Ohio State University and Mr. Pablito Villegas of the Land Bank of the Philippines were very helpful. The assistance of Messrs. Leo Cañeda and Paul Bernardo Lobo of the ACPC are also acknowledged.

[2] Executive Director, ACPC, and Acting Assistant Secretary for Policy and Planning, Department of Agriculture, Philippines.

distortions in financial markets, and introduced confusion in the public mind about loans, subsidies, and even charity (Adams, Graham, and Von Pischke, 1984; Tolentino, 1986).

To put the issues in their proper context and to make for more informed discussions, this article provides some facts and observations about agricultural credit. They are derived from the ongoing program to rehabilitate rural banks (Dominguez, 1988), the effort to reorient the concept of "Supervised Credit," and the creation of the Comprehensive Agricultural Loan Fund or CALF (Tolentino, 1986). Reference is further made to a larger set of studies on rural finance undertaken, some jointly and some independently, by researchers and analysts at the Agricultural Credit Policy Council (ACPC), the Philippine Institute for Development Studies, The Ohio State University, and the University of the Philippines.

The status of rural banks

1. As of December 1987, there were 850 operating rural banks. This contrasts sharply with the peak year of 1981 when there were 1,167 existing rural banks. As the Philippine economy deteriorated from 1980 onwards, the government found that it could no longer afford to keep the subsidies and lending funds flowing to and through the rural banks. Simultaneously, rural bankers began to find it more difficult to secure funds and subsidies from the government. As a consequence, they could not roll over or re-finance existing loans. Finding that rural banking was no longer an easily profitable business, many rural bankers chose to close shop. Other

rural banks that were seriously in financial trouble were also closed by the government as a matter of law and regular supervision (Dominguez, 1988).

2. Of the 856 rural banks that were still operating by the end of 1986, 82% were behind in their repayments on their government loans at very heavily subsidized rates of 1% and 3% (Task Force, 1986). Of these arrearages, 93% were past due for at least a year (DA, 1986); most of these obligations were also uncollateralized and, as such, probably uncollectible. Many rural banks then bore heavy burdens of bills payable to the Central Bank of the Philippines and portfolios dominated by loans that were long past due.

3. Most of the rural banks are in trouble because of two major reasons. First, since their portfolios are heavily exposed to agriculture, they bear the burden of the generally greater risk involved in agricultural projects (Graham, 1987). As a whole, 57% of their loans are made for agricultural projects while only 7% of the loans made by non-rural banks are for the same purpose (ACPC, 1988). Second, rural banks have become very dependent on the government for their supply of loanable funds and for management assistance (Tolentino, 1986). Because of their ties to government programs, they cannot diversify their portfolios and spread their risks (Dominguez, 1988). Also, they have failed to mobilize savings as the source of lending funds, either because they neglected to generate deposits or because they are located in areas where savings are not forthcoming in the first place (Blanco and Meyer, 1988). In essence, rural banks do not operate like commercial banks.

4. Given the dependence of rural banks on government-supplied subsidies and funds, it is not surprising that rural bankers gave the loudest protests when new policies were implemented which effectively reduced their access to the very low-cost government deposits and re-discounting funds. Yet it should be kept in mind that the intent of the new set of policies was not to help rural bankers alone; rather, they were aimed at providing credit for the entire rural economy over the medium- and long-run (Tolentino, 1988).

5. The ongoing rehabilitation process for rural banks is selective in the sense that only the rural bankers who are willing and able to make a commitment to continued banking, as well as the rural banks that are still able to recover without long-term continued subsidies from public resources, will be able to participate (Dominguez, 1988).

6. Participation in the rehabilitation program is further selective since it is conditioned by the stockholders' infusion of fresh capital into their rural banks. The amount of fresh capital required for entry into the program is dependent not only on the financial health of the bank but also on the capacity of the rural banker to manage an extended 15-year program to repay its obligations and write down the bad loans in its portfolio. The completion of the rehabilitation process should see the emergence of a smaller but stronger rural banking system.

The supply of agricultural credit

7. Of the total supply of formal credit to agricultural production in 1986, only about 12% was supplied through the rural banks while the bulk or 82% was supplied by commercial banks (ACPC, 1988b).

8. The total estimated demands for agricultural production credit in the Philippines in 1987 reached over PHP 60 billion (Tolentino, 1986).

9. The government had direct control of only about PHP 1 billion in agricultural funds. About PHP 700 million of these funds were consolidated into the CALF. Thus, the government could only serve, on a direct lending basis, potentially not more than 16% of the total credit demand for 1987.

10. Even at its peak of supervised credit programs in 1979, the government was able to supply only 24% of all bank agricultural production credits. In the past 20 years, the average proportion of total formal credit flows provided by government sources came to only about 12%. In 1986, the government-supplied proportion had dropped to only 2%. The private banking sector has always provided the bulk of formal production credit (ACPC, 1988b).

11. The government has always subsidized the cost of credit heavily. In the period 1970-80, the government lent money to the Philippine National Bank and to rural banks at 1% to 3%; unfortunately, it had to borrow these funds from abroad at open-market commercial rates of 13.5% (DA, 1986).

12. While both the government and the rural banks are short of loanable funds, the rest of the banking system is very liquid. The estimated excess reserves of the system in mid-1987 was over PHP 35 billion. It seems that the principal thrust of policy then must be to encourage banks to lend their funds to agriculture. The government's role is to provide incentives, risk-reducing mechanisms, and guarantees so that the banks with the funds will be willing to perform the required lending (Dominguez, 1988).

13. The CALF is designed to serve as a guarantee fund, not as a lending fund. Through this mechanism, the government hopes to reduce the risk of bank lending to agriculture as well as maximize limited government funds. The operations of the Quedan Guarantee Fund Board (QGFB) illustrates such leveraging of limited funds. While its guarantee base in 1986 and 1987 was only PHP 95 million, QGFB was able to guarantee a total of PHP 1 billion worth of loans in 1986 and PHP 1.5 billion in 1987, achieving a multiplier effect 11 times its capital base for the former year and 15 times for the latter (Tolentino, 1988b).

Informal lenders

14. Two-thirds of all Filipino farmers who borrow do so from informal lenders (TBAC, 1986; ACPC, 1988a). Compared to banks, informal lenders are very accessible to borrowers as they themselves give out the loans at the farmer's house and collect the repayment at the farmgate. They even accept payments in kind and they also hardly demand processing and paperwork. They also lend not only for production but also for consumption purposes (Lamberte, 1985).

15. In nominal terms, the borrowing rates charged by informal lenders appear to be much higher than those charged by banks. However, these rates do not consider the borrowing costs involved in processing time, loss in production due to delays in the release of loans, transportation between the borrowers' home and the bank, paperwork, literacy requirements, and the need to repay loans in cash (Abiad, Graham, and Cuevas, 1988). All these factors translate into the added costs (transactions costs) of borrowing from banks. Thus, when the effective borrowing rate is considered, the rates charged by banks become comparable to, if not higher than, those charged by informal lenders. This helps explain why, in spite of the lower nominal borrowing rate charged by banks, most farmers still choose to borrow from the informal sector (Clar De Jesus and Cuevas, 1988; Lamberte, 1985).

16. Government must provide an atmosphere wherein banks can reduce the effective borrowing rate at which they lend. Policies to reduce intermediation and transaction costs are, therefore, critical. These include streamlining the regulatory requirements imposed by government, increasing investments in rural infrastructure to lower the cost of transportation and communications in rural areas, and providing guarantee schemes that decrease the banks' cost of absorbing defaults (Abiad, Graham, and Cuevas, 1988; Clar De Jesus and Cuevas, 1988; Untalan and Cuevas, 1988).

17. The lender's cost of absorbing such defaults is critical because the lender, informal or formal, also shares the risks in lending. In many cases, the basic collateral that the lender exacts is the condition that when a borrower defaults, he cannot borrow again (Floro, 1986). The cost of such risk-taking translates into higher lending rates by the banks and the informal lenders (Untalan and Cuevas, 1988).

The government's performance as a banker

18. Aside from lending funds via the Central Bank, government departments, particularly the Department of Agriculture (DA), assumed the role of a bank during the past two decades. But government's performance as a banker has been dismal. The average repayment rate on government-run programs is about 49%. This effectively makes the government give away half of the money. Furthermore, the government's administrative cost of almost eight centavos per peso lent out was about three times that of the private sector (Tolentino, 1986; Soberano, 1986).

19. Until the creation of CALF, the government managed 39 separate commodity-targeted and subsidized credit programs for agriculture (note that only 17 of the 39 programs were consolidated into the CALF). These programs were run by management committees whose members were part-time detailees from various departments. Ironically, each of the committees' administrative budgets, averaging half a million pesos per year, principally consisted of the committee members' honoraria (Tolentino, 1986).

20. The fact that the government was a direct lender put a great deal of discretion in the hands of the bureaucracy which had little or no capacity to perform banking functions. Such discretion gave rise to patronage powers and relationships in allocating credit; it then opened the possibility of corruption. It also created a perception in the public mind (buttressed by observations of actual cases) that borrowers could go directly to the offices of the DA and leave with checks in their hands (Tolentino, 1986).

Subsidized credit as "assistance" to farmers

21. Even if government made "cheap" credit available, it did not really help the small proportion of farmers who actually were able to get them. The cost of credit in proportion to the farmer's total production cost is only about 6%. The critical costs are those for fertilizer, 35%; pesticides, 15%; seeds, 9%; and labor, 35% (Cañeda, 1988). Therefore, government assistance focused on lowering the cost of these critical inputs will go a lot farther than support in terms of cheap credit. Even if credit were available to farmers at no cost, the effect would at most be only a 6% reduction in production cost.

22. The subsidy element in concessional credit is tied to the size of the loan. Small loans provide small subsidies while large loans generate large subsidies. As such, the larger farmers always ended up getting the large loans and therefore, the greater subsidies. Credit-based subsidies then became regressive.

Subsidized credit and the banking system's efficiency

23. The government cannot force banks to charge the lowest borrowing rates and accept the most defaults on the smallest, riskiest loans. Unless the government is willing and able to absorb the cost of such policies, to require banks to act accordingly would be tantamount to forcing them to commit financial suicide.

24. In the same vein that government cannot force banks to act against basic banking principles, the government cannot force borrowers to apply the loans they receive to predetermined uses. Indeed, loans may be released in kind. However, the farmer may have borrowed for rice not because he perceives that rice production is profitable but because loans for rice production were available. Credit is fungible: that is, the farmer can receive the loans in kind, sell the commodities, and then apply the proceeds towards the investment he perceives to be profitable. Nor can the supervision of the farmer by the extension agent prevent "loan diversion" since it is impossible for the extension agent to be on-hand 24 hours a day.

25. The bureaucratic structures and procedures built around the supervised credit schemes transferred the responsibility for the decision-making on loans from the banks to the national department level where the "guidelines" for loan programs were formulated. Unfortunately, these guidelines did not often correspond with local realities; yet they had to be followed or no loan funds would be released. The basic function of loan appraisal was then subverted and shifted away from the professional lenders to the Manila-based bureaucrats (Tolentino, 1986).

26. A specific case of a guideline not corresponding to actual reality is the limitation on loan sizes according to national standards, as the limits barely covered commodity input costs. For example in rice production, labor costs were supposed to be equity-sourced, yet the new technology for high-yielding varieties makes the use of hired labor almost compulsory. Thus, the farmer has to borrow additional amounts from the informal market to cover

the cost of labor. For obvious reasons, he also pays the informal lender first.

27. Subsidized interest rates may also act as a disincentive to deposits. Since banks are intermediaries, they must mobilize deposits as their primary source of funds for relending. With the operation of legal ceilings on interest rates, borrowing rates on loans were held down and the interest rate paid on deposits also had to be depressed since banks have to make a margin, a spread between their borrowing and lending rates. To the extent that the saving public is sensitive to incentives and changes in deposit interest rates, then savings are kept away from banks as deposit rates fall (Clar De Jesus and Cuevas, 1988; Rodriguez and Meyer, 1988). The cap on interest rates, in tandem with the available low-cost funds from government, thus helps explain the dependence of rural banks on government-supplied deposits and loanable funds (Tolentino, 1986).

28. Although Presidential Decree No. 717 (the Agri-Agra Loan Quota Law) mandates that banks allocate a minimum of 25% of their loans to agricultural projects and agrarian reform beneficiaries; in practice, banks have lent only an average of less than 10% of their loans to agricultural projects. They hesitate to face the greater risks and transaction costs inherent in agricultural projects and so they take the safe way out: they invest in government securities. But since such securities earn at much lower rates, PD 717 in effect raises the intermediation cost of banks, a cost which in effect further reduces credit flows and increases borrowing rates for the financial system and the public as a whole.

Subsidized credit, agricultural profitability, and agricultural production

29. Cheap credit cannot make an unprofitable project profitable. The critical elements that will ensure the positive profitability of agricultural projects are those that will enhance the viability of the projects; improve the credit-worthiness of agricultural borrowers; reduce the prices of critical inputs such as fertilizers, pesticides, and seeds; and raise the prices of agricultural outputs.

30. The burden of supporting agricultural profitability falls not only on the DA but also on other government departments and agencies to:

    a. Provide the critical support infrastructure for efficiency, productivity, trade, and commerce– irrigation, roads, ports, bridges, electrification, storage, and transport;
    b. Increase the productivity of agricultural labor;
    c. Ensure the adequate supply and reduce the prices of fertilizer, pesticides, and seeds;
    d. Improve the effectiveness of the government, principally through the National Food Authority, in stabilizing the prices of palay for farmers and rice for consumers; and
    e. Reform the trade policies which decreased the income realized both by the country and by the farmers from agricultural exports.

31. It is often claimed that the scarcity of agricultural credit has led to production shortfalls, particularly in rice. Data on available bank credit and agricultural productivity show that the relationship between rice production and bank credit (if a causal, however tenuous, relationship is to be presumed) is negative. While the average flows of rice production credit from banks have been decreasing at a rate of over 14% per year, palay production has consistently increased at about 2%. Even in 1984, when the flow of credit from banks for rice production fell by 65%, palay production still grew by 1.3%.

32. Furthermore, should any relationship between credit flows and farm income levels be presumed, the data on available bank credit and the incomes of agricultural families is also worth noting. Indeed, the flow of bank credit has been decreasing at a rate of about 1.4% per year. In contrast, per capita income in agriculture still grew by 0.3% per year.

33. Finally, when the profitability of agricultural projects is assured, then credit would flow towards it without the need for a specialized credit program. Farmers who are able to repay their living costs will also pay off their loans. Bankers and farmers are more astute and trustworthy than what is often assumed by traditional credit programs. They will invest in projects that they think will bring them adequate returns on their investments. They do pay, but only after they have assured that the basic needs of their families have been met.

Conclusion

It is clear that the adequate availability of finance is a must for growth. Yet the means to enhance financial flows is unclear. The good intentions behind many government efforts to channel credit to agriculture were eclipsed by the actual adverse effects of the programs and policies. The lessons of experience, painful and expensive as these are, now tell us that undue intervention by government in the financial market can lead to undesirable results. The critical elements which enable and attract finance to agriculture are often not found in the financial system but in the infrastructure, agriculture, trade, and monetary systems. These systems interact and, in the context of appropriate policies, serve to create a dynamic, resurgent rural economy–the medium within which the financial system and the rural dweller can thrive.

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CHAPTER 2

Rural financial development in the Philippines: Recent changes and priority issues[1]

Policy Brief Vol. 2 No. 6
Agricultural Credit Policy Council
(31 August 1989)[2]

The advent of the administration of President Corazon C. Aquino was accompanied by various reforms in the different sectors of the economy, one of which was the rural financial sector. The important changes instituted so far are:

Major financial reforms

Minimal role of the Central Bank in rural finance

For almost two decades, the Central Bank of the Philippines has been actively involved in allocating financial resources to the agriculture sector and other "priority" sectors. This

[1] This document is based on a summary paper written by Dr. Richard L. Meyer of the Ohio State University, May 1989. Developments after May 1989 were added by the Agricultural Credit Policy Council staff. Entered as Second-Class Mail at the Central Bank Post Office under Permit No. 222, dated 22 May 1989.

[2] With Dr. V. Bruce J. Tolentino as Executive Director, Dr. Gilberto M. Llanto as Deputy Executive Director for Policy Research and Analysis, and Orlando S. Abelgas as Deputy Executive Director for Comprehensive Agricultural Loan Fund, ACPC

was manifested through subsidized agricultural loans, quotas to expand the rural lending facility of the banking system, rediscounting privileges to agriculture, and involvement in revitalizing the operation of rural banks.

This strategy was both costly and regressive because it undermined the viability of rural banks, reduced the flow of funds to the targeted sectors, and nurtured non-repayment of loans. The Central Bank is now moving away from this resource allocation role towards its traditional role of managing the money supply, inflation, and foreign debt, and maintaining the stability of the financial system.

Deregulation of interest rates

The deregulation of interest rates was part of the financial reforms initiated in 1980. This policy is continually strengthened and its scope made more comprehensive to include those on loans and deposits as well as on rediscounting.

Creation of the Comprehensive Agricultural Loan Fund (CALF)

The government now discourages direct lending by government non-financial agencies. Guarantee programs are instead being encouraged. These programs reduce government's risk in lending to agriculture, vouching for a maximum of 85% of the agricultural loans made by financial institutions.

The CALF, which is a consolidation of several government loan funds, provides additional guarantee funds for the Philippine Crop Insurance Corporation (PCIC), the Quedan Guarantee Fund Board (QGFB), the Guarantee Fund for Small and Medium Enterprises (GFSME), and the Bagong Pagkain ng Bayan (guarantee fund for loans to local government units).

The introduction of the Rural Bank Rehabilitation Program

This program is helping rural banks to recover from their debt-riddled state as a result of their involvement in past government credit programs. Participation requires fresh capital infusion to fulfill a risk asset ratio of 10% which is, in effect, a "ticket" for rehabilitation. Upon compliance, the rural bank becomes entitled to debt restructuring with the Central Bank and eligible to a wide range of benefits. Arrears converted into government equity are held and administered by the Land Bank of the Philippines (LBP).

Reforms triggered by the Letter of Intent of March 1989

- **Strengthen the legal framework for bank supervision.** This calls for a strict adherence to banking rules and regulations like setting up standards in treating failing banks, asset valuation, and loan provisioning.

- **Improve depositor protection.** Legislative action for the Philippine Deposit Insurance Corporation to increase the maximum amount of deposits insured, to institute corrective actions on erring banks, and to take up receivership and liquidation roles.

- **Improve competition in banking.** The requirement for new banks opening branches to purchase government securities has been repealed. This is a healthy sign insofar as it reduces cost of entry, thereby allowing more banks to open branches and paving the way for more competitive and innovative banking services to flourish.

- **Reduce intermediation costs.** There are signs that the phase out over the medium term of the 20% withholding tax on interest income of financial savings and the gross receipts tax on financial institutions will find fruition via a legislative bill.

- **Continue transferring the responsibility for supervising most agricultural credit programs to government financial institutions.** For a start, the Central Bank has relinquished its control over the World Bank and USAID-funded Agricultural Loan Fund to the LBP. The transfer is expected to be completed by 1990. The Integrated Rural Financing Program of the Department of Agriculture has also been turned over to the LBP for administration.

- **Sustain the policy of establishing market-oriented interest rates.** Interest rates remain market-determined, with loan guarantee schemes supporting this liberalization thrust.

Related reforms and issues

Reforms in the financial sector alone, however, are not sufficient for developing the rural financial sector. It should also be complemented by reforms in other agriculture-related concerns:

Price stabilization

There is a need to create an efficient marketing strategy that ensures a balance between the price received by producers

and that paid by consumers, especially for major commodities like rice. This is necessary if we are to help small farmers gain access to financial institutions so that they can provide the food requirements of consumers.

Speedy and fair implementation of the Comprehensive Agrarian Reform Program (CARP)

A major program of the government, the CARP offers unprecedented benefits for small farmers. With CARP, they will be afforded with land titles which banks require as collaterals.

Complementary programs to strengthen rural banks as financial intermediaries

Rural banks play an important role in delivering credit to rural households. The rehabilitation program should, therefore, not be limited to helping them build up their equity requirements. Their sad experience in lending to small farmers may make them reluctant to lend to the same in the future.

Further, new agricultural policies (e.g. guarantee programs) may be inadequate to reduce the risk in agricultural lending. Programs that would build up lender–borrower relationships are also necessary. Specifically, this can be done by:

- Helping rural banks develop cost-effective deposit mobilization methods;
- Providing a healthy environment for financial competition by relaxing the policy on bank branching and licensing of new banks; and
- Devising an early warning system that would identify weaknesses in banks early enough for corrective actions.

Role of the LBP

A proposal to turn the LBP into an apex bank for agriculture is underway. Such a move, however, requires careful examination since being a lead agricultural bank would require the following:

- A solid financial asset base that reflects integrity and commands financial discipline;
- The capability to provide quality service in all areas where the bank becomes involved; and
- The ability to institute viable financing programs as the need arises.

Informal finance

Despite resorting to guarantee programs and collateral substitutes, formal finance has not quite matched the success of the informal sector in providing credit to rural households. It may be useful to study the particular strategies and practices of informal lenders which make rural lending a more viable proposition.

Rural non-farm enterprises

The development of the agricultural sector lies in supporting not only farm enterprises but also the non-farm ones (those providing inputs and services to farm production). These enterprises provide primary and secondary employment in rural areas, either on-the-farm (e.g. handicrafts) or off-the-farm (in other villages or towns). However, their characteristics and needs are not well understood. Nevertheless, they should be given access to financial services since they may generate higher rates of return as well as contribute to household liquidity and improve the creditworthiness of the household.

Sustaining the reforms: The challenge

These reforms, as planned and implemented, showcase key developments affecting the rural financial market in the Philippines. Specifically, attention has been focused on the rehabilitation of rural banks, the expanded role of the LBP, and the role of both the informal financial markets and rural non-farm enterprises.

However, policymakers must continuously monitor and thwart any attempts to revive the old credit programs like financing rice production via credit subsidies. The gains and the positive achievements in the rural financial markets must be guarded and sustained.

CHAPTER 3

Transition mechanisms toward financial liberalization: The politics of financial reform in the Philippines[1]

V. Bruce J. Tolentino[2]

Introduction

Over the past two decades, the largest international aid agencies, working with the governments of many developing nations, have pumped funds in excess of USD 8 billion into specialized lending programs (Von Pischke, 1984). The basic aim of these programs has been to stimulate growth in specific areas considered as priority investment targets–or areas of "greatest need." At the same time, governments also attempted to regulate their countries' financial markets, with the objective of focusing the lending of their banking systems on those preferred areas of investment.

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[2] Executive Director, Agricultural Credit Policy Council, and Assistant Secretary for Policy and Planning, Department of Agriculture, Philippines.

Two decades of international experience have made it clear that these policies and programs have not performed as expected. In many cases, these programs have instead created problems and distortions (described below) which now require correction before progress can be achieved to resolve the initial conditions.

There seems to be little question that the increased availability of credit (meaning a larger supply of loans) leads to faster economic growth. The main problem seems to focus on just how the greater availability of credit for development projects and enterprises may be stimulated and secured. There continues to be great tension between approaches that rely on direct government provision, if not fiat and allocation, of loan funds to preferred sectors and purposes (the "targeting" approach) on the one hand and, on the other, the more recently-popularized "financial liberalization" package growing out of the work of Shaw and McKinnon (the "financial markets" approach) initially published in 1973.

The Keynesian prescription

The traditional analysis of the process of growth to a large extent grew out of the work of John Maynard Keynes (1935). The familiar Keynesian prescription for growth focuses on keeping interest rates low to stimulate investment which in turn produces greater output. The Keynesian approach also emphasizes the need to dampen the preference for cash holdings, such that the holdings of productive assets are maximized (Coats and Khatkhate, 1984). This was echoed by Tobin (1965) who extended the basic Harrod-Domar growth model to incorporate money, showing that the higher

the return to money in a household's portfolio of assets, the smaller the proportion of wealth allocated to capital, thus decelerating growth. The works of Keynes and Tobin have formed the principal theoretical foundation for controlled low-interest rate policies.

The Keynesian prescription of low-interest rates fits well with the appealing, and seemingly commonsensical, "supply-leading" strategy of financial development (Patrick, 1968). In the supply-led strategy, finance is provided in advance of effective demand. Thus, specialized lending institutions and programs were created to service priority commodities, sectors, purposes, and clientele. The presence of bankers and banks, it was argued, would help stimulate entrepreneurship and investment. Many developing countries adopted this strategy and many still maintain such programs despite the growing evidence that it has not only failed to effectively and efficiently stimulate development but has also introduced counterproductive distortions into the financial markets of the developing world (Meyer, 1988).

The discovery of financial repression

Financial regimes characterized principally by controlled low-interest rate policies have come to be described as "repressed" (McKinnon, 1973; Shaw, 1973). The primary feature of these financially-repressed economies is restrictions on interest rates, which are often rationalized not only for investment but also as protection of the public against "usury." They also suffer the following: (a) high reserve requirements imposed on bank deposits; (b) compulsory credit allocations which reduce incentives for holding claims on the domestic banking system;

(c) the distortionary provision of subsidized loans; and (d) the costly yet ineffective proliferation of specialized, government-run lending institutions created to cater to "preferred" sectors and borrowers. The distortionary effects of these restrictions are often exacerbated by price inflation. These problems include, among others, banking subsystems highly dependent on aid (both foreign and domestic); a mentality that equates government lending with welfare assistance; an interest rate structure which favors areas of lower, not higher, comparative advantage for developing economies; and significantly, a highly-developed, informal, curb financial market which complements and, to some extent, substitutes for the constrained formal financial system (Adams et al., 1984).

Finally, the results of repression include negative real deposit rates of interest on monetary assets. Thus, the demand for money and especially the supply by households of financialized savings fall as a proportion of the Gross National Product (GNP). Financialized savings, however, are the primary source of investment funds, particularly in developing countries where the stock and bond markets are small and the capital markets thin. Financial repression, thus, exacerbates the fragmentation of the financial market, where: (a) interest rates on bank lending vary arbitrarily from one group of preferred borrowers to another; (b) the process of self-finance is impaired since the accumulation of cash balances in preparation for lumpy and discrete investments is made more costly; and (c) socially-costly inflation hedges become attractive, private liquidity is minimized, and financial deepening outside of the formal banking system becomes prohibitive.

Financial repression and the informal financial market

An even more important adverse effect of financial repression is the reduced flow of loanable funds through the formal banking system. Thus, potential investors are forced to either self-finance or resort to the informal, curb market for loans (McKinnon, 1988). Self-finance can be costly since before large-scale investment is actually made, a process of accumulation of the required savings must be completed. Thus, investment programs require more time than would be necessary through an efficiently functioning credit system which arbitrates between the time preference options of borrowers and savers.

It is observed that in financially-repressed economies, the informal financial market is very large and active. However, detailed evidence on the informal market, like that of the underground economy, is very sketchy. Fragmentary evidence from the Philippine economy and other similar countries indicates that less than one-half of all households in the rural areas ever borrow from any source (ACPC, 1988a). Of those who borrow, close to three-quarters do so from informal sources. The rest either self-finance or enter quasi-lending arrangements such as contract growing and production (Tolentino, 1988b).

The nominal interest rates charged in the informal sector are often considered to be very high. This is to be expected since the default rates and servicing costs of such loans are very high. Moreover, given that a significant proportion of lending is done by the informal sector, the total volume of bank lending is kept low, thus keeping per unit lending costs in the overall loan market high.

Government intervention as a solution

Providing "solutions" to the relatively high level of interest rates and the constricted availability of loans has often been the rationale for government intervention in finance and the consequent development of financial repression. Placing controls on interest rates and quotas on lending given to favored clientele had effects opposite to expectations and has actually exacerbated the problems these were intended to solve (Gonzalez-Vega, 1976). Furthermore, governments which had enacted the repressive regulations have found that the task is not as straightforward nor as cheap – for all concerned – as it often seems.

For example, the US government has traditionally provided a high level of implicit subsidies to American farmers via government guarantees on bonds issued by the extensive US farm credit system. During the past few years, however, it found that it can hardly afford to cover the losses resulting from these guarantees, which have grown and pyramided over the years. Recent events in the system, as well as symptomatic bank failures in Texas and Illinois, point to the fragility of a system dependent on government support. The government is now scaling down the guarantees and relying more on market forces. Similarly, the European Economic Community is also now realizing the enormity of the long-term burdens that their system of agricultural credit and price supports; initiatives are now being enacted to scale such subsidies down to more affordable and less distortionary levels.

Financial liberalization

The liberalization of the economy from the constraints of repression has come to be accepted as a basic part of the agenda for development proposed by policy analysts and academicians (McKinnon, 1988). The basic prescription for a financially-repressed economy, according to the received wisdom, is the freeing of interest rates so that real interest rates are kept positive, close to open market levels, and attractive enough to draw financialized savings into the stream of loanable funds. Mandated allocations of credit to favored/preferred sectors must be abolished. Appropriate macroeconomic policies, particularly the maintenance of a stable price level and equilibrium exchange rate, complete the environment so that potential investors can judge the true scarcity price of capital and invest according to an undistorted set of criteria based on the productive efficiency of the investment.

A number of countries which adopted the Shaw-McKinnon prescriptions seem to have achieved remarkable success: at various times Japan, Korea, Taiwan, and Singapore have maintained highly positive real rates of interest and rates of financial growth. Yet other countries which incorporated the Shaw-McKinnon solutions in their economic liberalization programs ended in near collapse, particularly in the Latin American countries of Argentina, Chile, and Uruguay. This shows that the financial liberalization solution is not perfect and needs much refinement. But these prescriptions for financial liberalization have come to be accepted almost as truisms in the community of policy analysts and academicians. However, in the larger world of government policy makers and politicians, acceptance has been much slower, ensnared in great reluctance and met with intense resistance. The experience of the Philippines in this regard is instructive.

Constrained liberalization: The Philippine experience in financial reform

The Philippines initiated its efforts of financial liberalization as early as the late 1970s. A review initiated by the government itself into the repeal of the Anti-Usury Law had been ongoing since the mid-1970s and had cautiously recommended a gradual program to partly deregulate interest rates on loans. Implementation of deregulation was accelerated in 1980-81, when the monetary authorities were practically forced into the liberalization process. At that point, the International Monetary Fund and the World Bank, flexing their muscles, made their loan program for the cash-starved Philippines conditional upon the implementation of a package of financial reforms. The influence of these international lending agencies, however, paled beside the pressure for reform exerted by the perilous condition of the Philippine economy itself, as it struggled with lagging food production due to drought, the effects of the "oil shock", and a banking system exposed in crisis following the flight of the "high-kiting" industrialist Dewey Dee (Tolentino, 1986).

The package of financial sector reforms initiated in 1980-81 included: (a) the gradual abolition of legal ceilings on interest rates; (b) the reduction of specialization among types of banks; (c) an increase in the minimum capitalization, and thus the size of banks; and (d) the movement towards the closure of the allocative, low-interest rediscount and seed funding windows made available by the government, particularly those at the Central Bank of the Philippines (Singson, 1983).

It is not surprising that the package of reforms prescribed for the Philippines contained the classic elements of financial liberalization. The Philippines, after all, had adopted and even developed innovations for the supply-leading strategy of financial development lock, stock, and barrel up to the late 1970s. The Philippine legislature enacted a stringent Anti-Usury Law in the 1930s which prohibited loan interest rates of over 16% per annum. In the early 1950s, the government declared a "one town, one bank" policy and instituted very liberal qualification, capitalization, and supervision criteria for setting up rural banks. These rural banks were provided with generous subsidies and tax exemption facilities. The country also built up numerous specialized, targeted lending programs funded out of public funds and borrowings. There were over 50 such programs by the mid-1980s.

The Philippine government did implement the financial liberalization program. The Anti-Usury Law was repealed in the late 1970s. Interest rates on both loans and deposits have been fully market-determined since late 1985. Only about half of the specialized lending programs remain and these are mostly those that operate at close to market rates and are less targeted than those that closed. Many of the special privileges and subsidies enjoyed by the rural banks have been withdrawn and the "one-town, one-bank" policy is no longer followed. An extensive program to rehabilitate the rural banking system is now being implemented, and it is expected that the rural banks will emerge from the process as a smaller but stronger and more independent set of banks with a comparative advantage in lending to agriculture, particularly to small farmers (Dominguez, 1988).

Financial liberalization in the Philippines: The prospects

Do all the changes described above imply that the Philippine financial system has been liberalized?

At best, the Philippine record of liberalization is mixed. In spite of intense public resistance, the most obvious repressive factor–the interest rate structure–has generally been market-oriented since late 1985. Progress has been made toward minimizing the special, privileged lending rediscount windows of the government and the Central Bank. Specialization among the different types of banks has been slightly reduced. The Central Bank is now actively shifting away from the role of development banker to that of the steward of macroeconomic stability and monetary management.

The quotas

In spite of the progress that has been made, there still remain a number of constraints to true financial liberalization. The government has not made any progress in repealing Presidential Decree No. 717 or the Agri-Agra Law, which mandates that banks allocate at least 25% of their loan portfolios to agricultural projects and the beneficiaries of agrarian reform (Cañeda, 1988). There is also a law that requires that at least 75% of the deposits generated in each geographical region be loaned out in that same region. Although the intent of these quotas may be laudable, the actual effects are contrary to the objective. When the quotas are effectively enforced, loans are forced towards projects which are normally rejected by the banking system. Bankers face greater risks and incur greater

levels of default, and the costs of such risk and default are borne by society as a whole, further constricting the availability of credit (ACPC, 1988).

The experience of the Philippines with quotas has shown that the banking system has been able to evade the requirements. The actual proportion of agricultural loans in the Philippine financial system's portfolio has averaged only 10% over the past two decades (Tolentino, 1988). Banks routinely generate most of their deposit holdings in the rural areas, lend in the Manila area, but book or record some of the loans in the accounts of their provincial branches (Blanco and Meyer, 1988).

Taxation

The adverse effects of tax measures and policies on the financial market also need to be considered. The Philippine government currently taxes loans, applies the gross receipts tax, and also collects a final withholding tax of 20% interest income earned on time and savings deposits. Undoubtedly, these tax measures, aside from shifting the task of tax collection to the banks and, inappropriately, away from interest rates on savings deposits, are below the inflation rates of 8% to 10% per annum. The real deposit rate, which is negative, is further eroded by taxation.

Reserve requirements

A further constraint to liberalization is the high reserve requirement of the Central Bank, which is currently 21% on most categories of deposits. Such requirement effectively tie up a large proportion of potentially loanable funds and cause the banks to incur opportunity losses since interest paid on reserves is only about 4%. Funds tied up in reserves also

hamper the development and growth of the capital market, thus constraining long-term finance which can change the term structure of the portfolio of the Philippine financial system (McKinnon, 1988). Fully 95% of the system's loan assets are short-term (Tolentino, 1986). In an economy that has to focus on long-gestating agricultural projects to get development moving, a mismatch between credit terms and project characteristics can be fatal.

The reform of regulation

The general experience with financial liberalization has shown that the liberalization process is multifaceted. When the rules causing financial repression are reformed, the administrative and regulatory structures which implement the oppressive rules also need to be reformed. The Philippines' reform experience has left in its wake a regulatory structure which is not compatible with private sector ownership and management and minimum government intervention in business and enterprises. For instance, the fact that the government contributed most of the liquidity used for lending by the rural banks induced regulations whereby the government effectively ran the rural banks through detailed rules, governing almost all aspects of bank operations and decision-making. Thus, an extensive review of this structure is required to determine which regulations continue to repress the financial system, since liberalization changes the premises upon which regulatory activities are founded.

Adjusting toward financial liberalization: Transition mechanisms

The process of financial liberalization now unfolding in the Philippines has become a much more complex undertaking since it is taking place in a larger context of political and economic renewal and reform.

Adjusting to representative democracy

The Philippines is in the midst of readjusting to the workings of democracy. In the past two years, the country went through a series of popular, free elections. The new constitution was overwhelmingly ratified. A bicameral Congress, now operating after nearly 16 years of power and policy concentrated in the executive branch of government, is rediscovering its powers and flexing its muscles. Thus, the special and regional interests of the senators and representatives have come into play. It is no surprise that a most attractive area of proposed legislation is the provision of loans under special terms. There is, therefore, a clear danger that the economy will slide back into a financially-repressed state. At least three dozen draft laws are now being considered, the great majority of which, if passed into law, will again create a repressed financial market. Thus, major efforts need to be undertaken immediately to heed the lessons of the past, disseminate these widely, and specifically educate the policymakers about the results of that experience.

Transition mechanisms

The process of full political and economic liberalization will, of course, take time. The undesirable effects of financial repression will linger through the adjustment period. In an era

of political reform, pressures will build up in the government as interest groups press for specialized lending privileges perceived as being useful measures to attenuate poverty. This may lead to a renewed cycle of financial repression.

The fact that the process of financial liberalization, particularly its management and phasing, is not yet very well understood increases the danger of a fallback into repression. The unfortunate recent experiences of Chile, Brazil, and Peru provide ample evidence that the reform process is no picnic. These South American countries plunged dramatically, over an abbreviated period, into financial liberalization. The result thus far has been a painful withdrawal into a more repressive state (Connolly and Gonzalez-Vega, 1987). Even the foremost author of financial liberalization, Ronald McKinnon, upon observing the South American experience, has suggested that governments implementing liberalization would be well-advised to carefully establish a gradual phase in pattern which would allow both the financial and real sectors of the economy to adjust to the removal of the repressive instruments (McKinnon, 1988).

The uncertainties surrounding the process of financial liberalization, coupled with the political pressures for specialized lending mechanisms, provide the case for the enactment of measures which may soften any possibly undesirable effects of repression and reduce the political pressures lobbying for new and possibly repressive measures. This may include: (1) loan guarantees and commodity insurance systems; (2) seed funding facilities; (3) development of the so-called "non-traditional" financial intermediaries; and finally, (4) a renewed and intensified refocusing of public investment and attention to the fundamental factors which account for development and growth, such as savings and investment.

1. Loan guarantees and commodity insurance

Many governments have realized that government funding of projects is inefficient and ineffective, given the sheer magnitude of the funds required and the fact that governments are poor bankers. Guarantee and crop insurance programs are thought to enable governments to influence the volume and direction of lending by private banks, hence, the comparative advantage of the private banking sector in loan appraisal and monitoring is fully exploited. These programs may also be designed to cover only part of the risks involved, and thus scarce governmental resources may be leveraged for greater coverage.

The Philippines has had a crop insurance system–the Philippine Crop Insurance Corporation–operated by the government for seven years. The government has found that, apart from its initial capitalization, the system has so far been able to support its operations based on its revenues. The Philippines also has a group of guarantee systems–the Industrial Guarantee and Loan Fund, the Guarantee Fund for Small and Medium Enterprises, the Quedan Guarantee Fund Board, and the Philippine Export Loan and Guarantee Corporation. The performance of these guarantee agencies has been mixed. The most important lesson learned so far is that these agencies, in order to be sustainable, must develop skills in assessing the cash flow viability of the projects guaranteed. The attention to cash flow, rather than collateral, is what distinguishes them from banks. When effective, the agencies are able to facilitate formal lending to that segment of projects which are viable yet poorly collateralized and therefore non-bankable.

2. Seed funding facilities

Term transformation, or the process whereby the average maturity of the loan portfolio of the banking system is lengthened, is a critical indicator of growth in developing nations. However, political and economic uncertainties constrain the time horizons of bankers. In most developing countries, there usually are adequate funds for short-term lending but resources for medium- and long-term lending are very scarce. The capital market is also thin, and thus the long-term funds generated by pension, retirement, social security, trust, and insurance systems do not find their way into long-term loan and equity markets. This situation frequently leads governments to establish seed funding facilities whose basic objective is to initiate bank involvement in longer-term lending.

Seed funding programs are familiar interventions by the government in the Philippines. In fact, there were as many as 50 such programs at one time. These programs exemplified the hallmarks of financial repression: targeted to specific commodities, sectors, or clientele, and the funds were provided at subsidized, below-market rates. The seed funding facilities are currently in operation. Primarily the Industrial Guarantee and Loan Fund (IGLF), the Agricultural Loan Fund (AGL), and the Integrated Rural Financing Program (IRF) are available at market interest rates only to banks and financial institutions which meet rigorous standards of performance. Efforts are now being exerted to modify the rules surrounding the operation of the seed funds so that these may, in general, be used to fulfill the non-targeted liquidity requirements of the banks and participating financial institutions.

3. Development of "non-traditional" financial intermediaries

In recent years, much excitement has been generated by discoveries arising from research into self-help groups, cooperatives, pawnshops (or Rotating Savings and Credit Associations), and other informal sources of financial services. These informal agents often serve as substitutes for the repressed formal sector. More importantly, research has also indicated that the informal sector serves as a critical complement for formal finance. Informal lenders and institutions serve markets which the formal sector cannot serve, particularly the rural sector and the poor.

The development of financial functions in the voluntary, self-help groups also serves to strengthen the empowering potential of these institutions. In particular, the informal financial groups provide savings facilities which would otherwise be absent in the rural areas. These savings mechanisms enable the groups to intermediate finance between members with surplus funds and those with deficits. The group also provides opportunities for the poor to pool their individually-meagre resources into volumes large enough to finance lumpy investments.

The experience of cooperative banking in many countries– the Rabobank system of the Netherlands, the Raiffeisen Bank of Germany, the French Crédit Agricole, and the Japanese and Korean examples–have inspired many governments in developing nations to establish similar systems. The experience with these transplanted structures, however, has generally been disappointing. Recent research shows that while the physical structures of the cooperative financial intermediaries are easily copied, their evolution and historical development are not as easily transferred (Llanto and Quiñones, 1987). The efficient and viable operation of a cooperative bank is more learned

than legislated. Private sector domination and responsiveness to the demand and supply conditions in the market is critical for continued viability. Government subsidies cannot be provided endlessly. Thus, care and deliberation are required to ensure the success of cooperative systems and banking.

4. Refocusing on the fundamentals of development

One of the most basic concepts that must be remembered in considering the relationship between financial policy and development is that "subsidized credit will not make an unprofitable project profitable" (D. Adams, personal communication, 1987). Research and experience show that the critical elements of agricultural productivity and profitability, ranked in order of significance, are rural infrastructure like irrigation, roads, bridges and electrification, research and extension (Evenson, 1986); and rational agricultural price policies (Timmer, 1986; David, 1979). Forcing the financial system to lend for "development" purposes may be likened to pushing a string. Yet when the object of lending and investment is indeed profitable, finance will flow toward it naturally, with little or no inducement from the government (Tolentino, 1987).

Conclusion

The adequate availability of finance is a must for growth. Yet the means to enhance the flow of finance is unclear. We have made a brief review of the good intentions which brought many countries the world over into financial repression. Many of the premises upon which the regulation of financial markets

rests are flawed, and thus the regulations are ineffective, or worse, produce unintended and undesired results. Programs of financial liberalization have been attempted in some countries, some with success and others not achieving any alleviation of financial repression. The lessons of experience now tell us that while financial liberalization is a worthy undertaking, it ought to be implemented with care and deliberation. Moreover, a set of transition measures may be necessary to assist in the adjustment process from the repressed to the liberalized state. Such transition measures include guarantees, insurance, seed funding, non-traditional credit institutions, and a new emphasis on the fundamentals of development.

It also seems clear that political will is necessary to successfully carry out the process of financial liberalization so that growth and development may be accelerated and sustained. Furthermore, the liberalization process involves elements which lie outside the direct purview of the financial system. Political and economic stability is also critical, since depositor and banker confidence through a foreseeably positive horizon must be sustained in order that deposits are generated and maintained, thus making longer-term investments and loans feasible. Attention to basic development imperatives is also a must. Agrarian reform, which provides the foundations for a more equitable sharing of income and wealth and the resulting greater bankability of beneficiaries possessing titles to their lands, is necessary. The basic infrastructure of development and the fundamental services for agricultural productivity must be in place. These are the elements of the banking system which truly make the clients creditworthy and their projects viable. The bottom line is, therefore, the need to focus on the elements which create a resurgent, dynamic economy. This, coupled with financial liberalization, should result in a positively-responding financial sector in service of growth and development.

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CHAPTER 4

On the importance of the financial sector in developing countries[1]

V. Bruce J. Tolentino[2]

The organizers of the conference have requested a statement on the importance of the financial sector in developing countries. Thus, it is on behalf of the Government of the Philippines, and of my fellow participants who represent developing nations, that I have the honor of presenting this statement. We are certainly very grateful for the unparalleled opportunity to interact with and, in the process, learn from the analytical and policymaking luminaries participating in this conference. We only hope that we can use our learning effectively upon our return to our respective countries.

There is no doubt that the financial sector of any economy, whether developing or developed, is important. The critical difference is in the view of its importance, whether in itself or in terms of its services for other sectors. Let us note, as an example, the title of our conference, *International Conference on*

[1] Statement delivered at the U.N. International Conference on Savings and Credit for Development, Klarskovgaard, Denmark, 28-31 May 1990.

[2] Undersecretary for Policy and Planning, Department of Agriculture, Philippines.

Savings and Credit for Development. The implication is that the financial system is important insofar as it provides, or does not provide, support for other sectors or purposes–in this instance, for development. At other times, in countless documents, we read statements such as "credit for the poor", "finance for agriculture", "loans for small farmers", and so forth.

Certainly the saying, "the road to hell is paved with good intentions" is familiar to us all. Particularly in the case of finance, it is applicable. In the name of development and of the poor, governments and policymakers have enacted policies and executed interventions affecting the structure and operations of their financial systems. The results of these interventions we now all know: financial repression which, in effect, worsened the situation of the intended beneficiaries, as pointed out by Claudio Gonzalez-Vega's now classic "Iron Law of Interest Rate Restrictions."[3] Therefore, it is our hope that this conference does not again lead us down the primrose path.

Indeed, beyond the title, a perusal of the papers and the authors provides the assurance that the conference is on the right track.

Most of us have learned, or are still learning, via the hard and expensive way that the significance of financial systems is derived from their operation as the intermediaries between sectors, providing for the transfer, exchange, and transmission of value. In a general equilibrium sense, sectors are interrelated and the interrelations are effected through the operations of the financial system. We may then casually say that any

[3] Claudio Gonzalez-Vega, "On the Iron Law of Interest Rate Restrictions: Agricultural Credit Policies in Costa Rica and Other Less Developed Countries." Unpublished PhD Dissertation, Stanford University, 1976.

interventions on the financial system are thus interventions on the real sectors of the economy, as transmitted through and by the financial system. Financial repression is actually economic repression.

And the learning process goes on. The literature on financial repression now has a history of at least a quarter-century, and even with this conference we continue to add to that body of knowledge. It does seem that for the purposes of policy reform, enough knowledge has been distilled and extracted. The focus should now be on the translation of the research into advocacy for a politically acceptable and successful reform process. This conference, we believe, takes an important step toward that advocacy. We are thankful to the donors, the Danish government, and the United Nations system for making it possible for us to travel to this beautiful country and to participate in and learn at this conference.

Thank you very much!

CHAPTER 5

Strengthening the rural financial system: Lessons from the Philippines[1]

Ernesto D. Bautista & V. Bruce J. Tolentino[2]

Summary

All too often, the rural financial system has been seen as a convenient instrument for addressing rural developing objectives. Prior to 1986, rural financial market policies followed the "supply-lending" approach via the creation of cheap credit programs and other selective credit policies. In 1986, the Philippine rural financial policy and strategy took on a new orientation. The new framework contains two basic elements, *viz.* a greater role of the market mechanism in the allocation of financial resources and the discontinuation of direct lending activities of non-financial government institutions. Funds previously earmarked for direct lending were consolidated into a single fund called the Comprehensive Agricultural Loan Fund, which is principally a guarantee fund

[1] Paper presented at the "Seminar on Improvement of Agricultural Structure" sponsored by the Asian Productivity Organization, Tokyo, Japan, 25 July – 4 August 1989.

[2] Director, Policy Development and Planning, Agricultural Credit Policy Council, and Assistant Secretary for Policy and Planning, Department of Agriculture, respectively.

operated through the facilities of three government guarantee institutions. Fears were expressed that the new policy will stop the flow of credit to agriculture and hurt agricultural production. However, results proved otherwise. Agriculture was the only sector that registered positive growth sales during the worst pest-war period in Philippine economic history (1983-1985). The relative proportion of agricultural loans maintained its parity with the peak years of cheap credit policy.

Underlying the shift in policy and strategy were lessons from almost 20 years of experience with cheap credit policy. The convenient access to cheap credit inhibited real financial intermediation in the rural economy. Savings mobilization was neglected as rural banks became mere conduits of cheap government money. Interest rate subsidies were largely captured by formal lenders and not the intended beneficiaries. High income farmers were able to get more access to cheap credit, resulting in a real income transfer from small to high income farmers.

Except for a few undesirable factors, selective credit policies and other generous fiscal incentives have been largely eliminated or realigned. The interest rate structure has been generally market-oriented since 1985. In their place, a credit guarantee mechanism through the CALF was established and operated. Under the CALF guarantee scheme, bank-originated agricultural loans are guaranteed up to a maximum of 85% of the default risk through the three guarantee institutions. By absorbing a significant portion of the default risk, the guarantee system hopes to induce banks to lend to agriculture in general and to small farmers in particular.

Contrary to perceptions that a policy of "benign neglect" underlies the current rural finance policy, a great deal is being done about agricultural credit. However, the process and the results are not easily discernible nor even comprehensible by the public as the reforms are largely structural in character and long-term in effect. These efforts include the rehabilitation of the rural banking system, the equity build-up of the cooperative rural banks, and the pilot replication of the Grameen Bank concept, among others.

The Philippines' experience with cheap credit policies and programs illustrates that no amount of cheap credit can improve the viability of rural producers unless fundamental changes in the agricultural structure (e.g. land tenure, marketing) are implemented in a comprehensive manner, including policies and strategies that make agriculture viable and profitable. Credit is a complementary mode of assistance and not a critical constraint, viable only when the critical support services and appropriate economic environment are present. Similarly, lessons from the on-going rural financial market reforms underscore the importance of disseminating the lessons of previous interventionist policies to preclude policy reversals that may undermine current rural development efforts.

Introduction

The importance of the rural financial system in rural development cannot be overemphasized. Far from being a passive actor, it performs the active and critical function of enabling the efficient intertemporal allocation of resources between surplus and deficit units through the issuance and

transformation of securities of diverse maturities, liquidity, and risk. All too often, however, the rural financial system has been seen as a convenient instrument for addressing rural development objectives via the creation of cheap credit programs and other selective credit policies. The convenience that the financial system provides in moving large sums of money to target beneficiaries and projects has thus been very attractive, offering a much easier route to development than implementing a land reform or infrastructure program.

While the intention and basis for such financial strategies appear sound and compelling, the adverse consequences on the rural financial system in particular and on rural development in general are often overlooked. Experiences in the Philippines and elsewhere (Sacay et al., 1985; Adams et al., 1984) indicate that the strategy of cheap credit not only undermines the viability and efficiency of the rural financial system but also worsens the distribution of income. This paper presents the Philippine experience on cheap credit policy, the current efforts on rural financial market reforms, and the lessons from these efforts.

The paper is organized into four sections. The first part describes the policy framework underlying the conduct of rural finance policy in the Philippines, the institutional structure of the rural financial system, and the agricultural credit situation. The second section describes the impact of interventionist policies on the efficiency of the financial market and on rural equity. The third section describes the current reforms in rural financial market policy, the status of the system, and the various components/programmes now being implemented. The last section identifies major issues and gaps in policy.

Current status

Overview of the agricultural sector

As the predominant sector in the economy, agriculture in 1987 accounted for 29% of the Gross Domestic Product (GDP), 24% of foreign exchange revenues, and 48% of the labor force. Poverty, however, is more pervasive in the agriculture/rural areas, a result of low income and a highly skewed distribution of ownership of the land. Rural incomes are on the average only 47% of urban income levels (World Bank, 1988). The core poor, defined as the lowest 30% in the income ladder, live in rural areas and are involved in agricultural activities, principally rice and corn farming. The average operational farm holding is 2.8 hectares. Sixty percent of the total cultivated area is planted to the two main staple crops, *viz.* rice (40%) and corn (20%).

The physical features and underlying agrarian structure of Philippine agriculture have exerted an important impact on the development of the rural financial system. Spatially dispersed small holdings make the transaction costs of credit prohibitive. Furthermore, the seasonality and riskiness inherent in agricultural production subject rural financial intermediaries to high levels of default and uncertainty. Only localized institutions with better information and lower costs like informal lenders can handle such default and risk characteristics. It is no wonder then that agriculture is largely served by the informal financial system and that the formal financial system shies away from rural lending. At the same time, the rural branches of commercial and other banks are essentially urban-oriented, serving only those highly but few capitalized clientele in the agricultural sector.

Policy framework

Prior to 1986, rural financial market policies in the Philippines followed the "supply-leading" approach. Under this approach, a policy of subsidized interest rate, supported by the liberal provision of credit by government agencies, as well as other selective credit policies were implemented. In 1986, under the auspices of the Agricultural Credit Policy Council (ACPC), rural finance policy took on a new orientation. Whereas previous policies were characterized by heavy government involvement in the pricing and direct allocation of financial resources, the new framework for credit policy now contains two basic elements, *viz*:

(1) A greater, if not total, role of the market mechanism in the allocation of financial resources; and
(2) The termination of direct lending activities of non-financial government institutions.

Funds previously earmarked for direct lending were consolidated into a single fund called the Comprehensive Agricultural Loan Fund (CALF). The CALF is a guarantee fund operated through the facilities of three existing government guarantee institutions, namely the Quedan Guarantee Fund Board (QGFB), the Guarantee Fund for Small and Medium Enterprises (GFSME), and the Philippine Crop Insurance Corporation (PCIC). Under the CALF guarantee scheme, bank-originated agricultural loans are guaranteed up to a maximum of 85% of the default risk through these institutions. These institutions may also call on the CALF guarantee in the event of default and claims. For the few remaining lending programs, the lending function has been transferred or is being transferred to the Land Bank of the Philippines (LBP) and other banks under some arrangements with the Department

of Agriculture (DA). Interest rates on agricultural loans are now market-determined.

Underlying the shift in policy and rural credit strategy is the recognition that:

- Cheap credit policies are ineffective unless the general economic environment in agriculture makes farming viable and profitable; and
- The crucial factor in integrating and developing the rural financial market is the reduction of administrative costs and default risks inherent in small farmers and rural credit through financial innovations.

These define and put into perspective the role of credit in rural development and that of government in the rural credit market. In the context of the Comprehensive Agrarian Reform Program (CARP), the new policy orientation underscores credit as a complementary mode of assistance viable only when the more critical infrastructure and other support services are in place. The role of government in rural credit markets is to support the reduction of risks and administrative costs through financial innovation by providing commodity insurance and credit guarantee facilities. The provision of these mechanisms anticipates the possible negative impacts by addressing the uncertainties in the collateral value of land engendered by the implementation of the CARP.

The government thus plays both a facilitating and supporting role in rural credit transactions by providing: complementary services e.g. extension; technical assistance to increase farmers' viability; and guarantee/insurance mechanisms to cover financial institutions' lending risk to agriculture.

Institutional structure of the agricultural credit system

The present agricultural credit system or rural financial system consists of the formal financial system and the guarantee institutions on the one hand, and the informal financial system on the other hand (Fig. 1). The former is composed of branches or units of commercial banks (KBs), private development banks (PDBs), thrift banks (TBs), and rural banks (RBs). Rural banks have the most extensive network in the rural areas. From a peak of 1,168 in 1981, only 840 rural banks remained operational as of December 1988. Many rural banks have closed due to the arrearages they incurred under the previous supervised credit program of the government. A special rehabilitation program was eventually implemented in 1986 to assist and strengthen the banks remaining in the system and to minimize more failures.

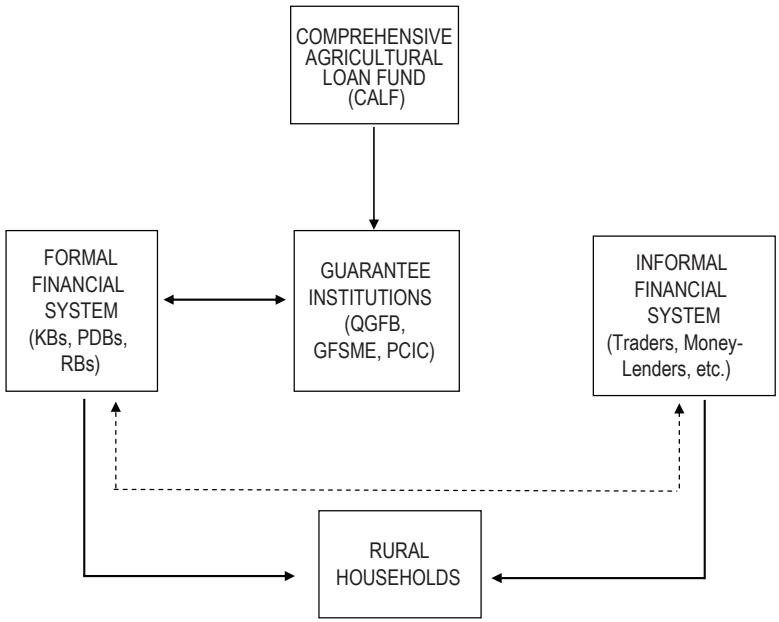

Figure 1. Institutional Structure of the Philippine Rural Financial System

While having the most extensive network, the rural financial system as of 1987 controls only 3.2% of the total financial system's resources. KBs on the other hand account for 82.2% while the PDBs, TBs, and other specialized government banks account for 14.5%.

The three existing credit guarantee institutions form a segment of the rural financial system. The QGFB operates the quedan system of guarantee for loans based on warehouse receipts or quedans of grain stocks. The GFSME extends the guarantee cover for medium- and long-term loans to agricultural enterprises originated by KBs and PDBs. The PCIC provides insurance cover for both rice and corn as well as guarantee cover for loans to small farmers with less than 750,000 sq.m. or 7 hectares. These institutions operate independently, at the same time also serving as the operational arm of the CALF (Fig. 1).

Finally, the informal financial market, which is a very important segment of the rural financial system, is largely outside the ambit of the formal regulatory system. It is a heterogeneous sector composed of moneylenders, traders, millers, merchants, landlords, etc. Its main distinctive characteristics are ease of entry and exit, informality of transactions, and smallness of scale. Although there are no accurate quantitative magnitudes of its size, anecdotal evidence and micro level surveys indicate its importance in rural credit transactions. Philippine experience indicates that two out of every three farmers borrow from informal sources. Further, while high interest rates do prevail in the informal financial market, particularly in sectors where the financial and economic environment is relatively undeveloped and the clientele of credit remains economically or tenurally disadvantaged (Sacay et al., 1985), the indisputable fact remains that the informal financial sources provide real services particularly to small producers outside the market serviced by the formal financial system.

Agricultural credit situation

In the past two decades, the proportion of agricultural loans made by the formal financial system in the Philippines has steadily declined. From a high of 19.1% share in 1964, it had fallen to its lowest level by 1976 to only 5.2%. In 1988, the proportion of agricultural loans to total loans was 7.4%, making the average share over the past two decades of only about 10% (Table 1). While fears were expressed that the termination of credit programs for small farmers will hurt agricultural production, these fears have been proven to be largely unfounded. From 1983 to 1985 when the Philippines experienced its worst economic problem, agriculture was the only sector which registered sustained positive growth rates. The relative proportion of agricultural loans during the period 1986-89 maintains its parity with the peak period (1973-1978) of the government's supervised credit program when large sums of cheap credit were channeled to agriculture. These illustrate that cheap credit per se does not guarantee agricultural growth. Rather, it is the economic environment that makes agriculture profitable that determines the viability and growth of the financial system.

Impact of rural financial market policies

Rationale and types of policy interventions in the rural financial market

Intervention in rural financial markets is a common and pervasive feature of most rural/agricultural development strategies. A common view underlying these interventions is the perception that credit is a prerequisite or a major

constraint in the adoption of new technologies. Proponents of this view argue that channeling credit to pre-identified groups or specific commodities will encourage rural producers to adopt new and improved technologies and make productive investments. The ultimate pay-off will come in terms of increased output, expansion of the growth potential of the rural economy, and more importantly an increase in farmer's income. The provision of cheap credit is thought of as a corrective mechanism to ameliorate policy biases against agriculture brought about by macroeconomic policies such as overvalued exchange rates, price controls, and taxes on agricultural commodities.

Public intervention in the rural financial market takes several forms. Broadly, the manner of intervention may be in the physical distribution of financial resources through the organization or establishment of government-owned or controlled financial and non-financial institutions or highly subsidized private institutions; and through the pricing and allocation of credit resources. In the Philippine context, the former is exemplified by the creation of the LBP and the now defunct Agricultural Credit and Cooperative Financing Administration later renamed Agricultural Credit Administration, both of which are directly involved in the distribution of credit to the countryside. The establishment of rural banks likewise falls within this category. Although privately operated, their operations were highly subsidized by the government through the provision of counterpart funding, exemption from taxes and fees etc., training, and preferential interest rates. Interventions of the second form include subsidized interest rates on advances/loans from the Central Bank of the Philippines made available through the rediscounting window or special budgetary appropriations, and the establishment of loan quota, among others.

Table 1. Agricultural production loans granted, production to total loans, share to total agricultural Gross Value Added

Year		Agricultural Loans				% Agri-Loan to Total Loans	% Agri-Loan to Agri GVA	Agricultural Sector GVA		
		Amount (PM)		% Annual GR				% Agri-Loan to Agri GVA	Annual GR (%)	
		Current	72=100	Current	72=100				Current	1972=100
1.	1966	1,504.30	-	-	-	18.0	-	-	-	-
2.	1967	2,053.30	3,559.20	28.0	-	19.1	13.9	11.7	-	-
3.	1968	2,218.30	3,456.37	8.0	(2.9)	13.3	22.8	29.0	(22.0)	(29.9)
4.	1969	2,332.50	3,339.30	5.2	(3.4)	13.2	21.9	28.4	12.2	3.1
5.	1970	2,851.10	2,552.09	22.2	6.7	12.5	19.8	29.4	17.2	2.2
6.	1971	3,226.00	3,373.42	13.2	(5.3)	10.8	19.3	29.3	25.3	4.9
7.	1972	3,401.00	3,401.00	3.4	0.8	10.0	20.1	28.4	8.5	3.6
8.	1973	4,005.20	3,234.70	17.8	(4.9)	8.3	16.1	29.1	31.4	5.2
9.	1974	5,928.80	3,524.43	48.0	9.0	6.9	13.5	29.5	39.4	2.5
10.	1975	7,942.50	4,383.28	34.0	24.4	6.6	18.0	28.8	12.4	4.3
11.	1976	8,223.50	4,326.39	3.5	(1.3)	5.2	21.3	27.6	13.3	8.0.
12.	1977	9,005.70	4,455.40	9.5	3.0	5.5	19.7	27.0	11.6	5.0
13.	1978	12,386.40	5,637.18	37.5	26.9	7.4	19.0	23.6	12.8	4.2
14.	1979	17,916.80	7,292.14	44.7	28..9	9.2	22.3	25.5	17.3	4.5
15.	1980	20,946.40	7,474.45	16.9	2.5	9.2	29.0	23.3	11.2	5.0
16.	1981	25,376.60	8,999.11	21.2	20.4	9.1	30.2	22.7	12.4	3.9
17.	1982	27,232.70	9,008.20	7.3	0.1	8.2	33.1	22.5	10.6	3.1
18.	1983	28,281.10	8,310.97	3.9	7.7	8.0	32.2	22.0	10.2	(2.1)
19.	1984	27,070.10	5,047.50	(4.3)	(41.5)	8.1	19.3	25.4	65.6	1.2
20.	1985	27,002.10	4,474.80	(0.3)	(11.4)	9.9	16.7	26.5	15.7	2.4
21.	1986	25,114.40	4,180.30	(7.0)	(6.6)	7.5	15.4	25.9	6.2	5.5
22.	1987	27,460.00	4,239.60	9.33	1.4	7.3	15.5	24.9	9.5	(1.02)
23.	1988	35,290.00	4,165.20	28.5	21.8	7.4	18.6	23.0	11.0	3.4
Average										
1886-88		17,207.34	5,020.72	16.07	2.9	9.6	20.8	25.8	15.3	1.9

Source: ACPC

Impact on financial market efficiency and equity

Far from being innocuous, interventions in rural financial markets exert immeasurably adverse long-term effects on market efficiency and rural welfare. Experiences in the Philippines (Sacay et al., 1985) and other countries (Adams et al., 1984) indicate the deleterious effects of these distortions on rural development in general and on the rural financial market in particular.

The 20 years of Philippine experience with cheap credit policy via interest rate ceilings as a tool for development finance is instructive. The convenient access to cheap credit inhibited real financial intermediation in the rural economy. Savings mobilization was neglected as rural banks obtained more than half of their loanable funds from special time deposits and rediscounts with the Central Bank (Neri and Llanto, 1985). The rural banks in effect became mere conduits of government credit, performing little real banking functions such as deposit mobilization, portfolio diversification, and financial intermediation. Since loan portfolios were not judiciously managed, many rural banks eventually found themselves saddled with high arrearages. Tolentino (1987) noted the rapid deterioration of the quality of loan portfolios. Prior to the Masagana 99 program, only 11% of the rural banking system's loan portfolio was past due. By 1984 this proportion had increased to one-third. Consequently, when financial reforms were implemented in 1981, almost half of the rural banking system was rendered insolvent, necessitating a special rehabilitation program. To date, hardly half of the rural banks are operating normally. Of the 1,018 rural banks as of December 1988, a total of 178 are under receivership while 522 have applied for rehabilitation.

The Philippine experience also illustrates the adverse distributional impact of cheap credit policy. Esguerra (1981) showed that the interest rate subsidies were largely captured by formal lenders and not the intended target beneficiaries (the farmer-borrowers). Further, since cost of lending to small farmers is high, banks ration credit in favor of the bigger farmers. This worsens rural income distribution (Gonzalez-Vega, 1977). Neri and Llanto (1985) found that low income farmers who availed of 73% of the total number of loans secured only 32% of the total amount of subsidized loans granted. On the other hand, high income farmers who accounted for 27% of the total number of subsidized loans were able to avail of 68% of the total amount. This results in a real income transfer from small to high income farmers.

An equally important aspect of cheap credit funded through the rediscounting window of the Central Bank concerns its implications for domestic monetary expansion and balance of payment. Liberal rediscounting causes domestic monetary expansion. This has an immediate impact on domestic liquidity. The ratio of outstanding rediscounts to domestic liquidity averaged 9% from 1949 to 1972. But when special credit programs proliferated during the period 1973-82, the average ratio of outstanding rediscounts increased to 13%, an increase of 44.4% over the average of the previously cited period (Lamberte and Lim, 1987). This contributed in an important manner to the excess liquidity problem of the Philippines during the early part of the 1980s and correspondingly to balance of payment pressure (Llanto, 1987).

Finally, the politicization of credit allocation of specialized credit financial institutions has important yet unmeasurable implications on the rural financial system. Widespread defaults and poor credit discipline discourage participation

of other financial institutions in rural lending because of the heightened political sensitivity surrounding the enforcement of rural loan contracts (Von Pischke, 1981).

Rural credit policies and programmes

General thrust, status, and strategy of rural financial market liberalization reforms

As part of the financial liberalization program started in 1981, selective credit policies have been largely eliminated or realigned. In spite of intense public resistance, the most obvious repressive factor–the interest rate structure–has generally been market-oriented since 1985. Progress has been made toward minimizing the special, privileged lending and rediscount windows of the government and the Central Bank. The Central Bank is now actively shifting away from the role of development banker to that of a steward of macroeconomic stability and monetary management (Tolentino, 1988). Similarly, most of the credit and the generous fiscal incentives previously enjoyed by the rural banks have been withdrawn. However, a few other undesirable factors have remained. In spite of the progress that has been made, there has been no 'real' movement toward the repeal of the Agri-Agra Law (Agricultural Loan Quota Policy) which mandates banks to allocate at least 25% of their loan portfolio to agricultural projects and agrarian reform beneficiaries. Although the intent of these quotas may be laudable, the actual effects are contrary to the objective. The Philippine experience with quotas has shown that the banking system has been able to evade the requirements by investing in eligible alternative government securities (Table 2). The actual proportion of agricultural

loans in the Philippine financial system's portfolio has averaged only 10% over the past two decades (Tolentino, 1988).

Recognizing that the process of financial liberalization, particularly its management and phasing, is not very well understood increases the possibility of painful economic adjustments and pressures leading to policy reversals. Consequently, some transitional mechanisms need to be put in place. Loan guarantees and crop insurance are thought to be useful for this role. At present they form the linchpin of rural finance policy in the Philippines. Although acceptability is another matter, the advantage of a guarantee facility is its ability to create a multiplier effect from a limited fund base which otherwise would have easily depleted if utilized as a direct loan fund. Furthermore, by addressing a substantial portion of the risk of rural lending, banks are induced to lend to rural producers/projects.

Table 2. Compliance with agricultural credit quota (PD 717) by type of bank, 1975-1985

	OVERALL	KBs	TBs a/	RBs b/	SGBs
PERCENT COMPLIANCE					
10% Agrarian Reform Credit	117.6	97.9	121.6	253.8	163.5
15% Agricultural Credit	226.8	175.6	116.6	737.8	712.0
25% Total Requirement	183.1	144.6	118.6	544.2	492.6
PERCENT DISTRIBUTION OF COMPLIANCE WITH AGRARIAN REFORM CREDIT SUBQUOTA					
Direct Loans	38.4	18.8	12.8	93.5	95.0
Securities Investment	61.6	81.2	87.2	6.5	5.0

a/ Excludes SSLAs

b/ Average from 1979-85

Source: ACPC

Credit programs

Contrary to perceptions that a policy of a "benign neglect" underlies the current rural finance policy, a great deal is currently being done about agricultural credit. However, as Tolentino (1987) rightly observes, the process and the results of the current efforts are not easily discernible nor even comprehensible by the public, as the reforms are largely structural in character and long term in effects. The major programs and activities include the following:

Rural Bank Rehabilitation Program. This program was implemented in 1986 to enable rural banks with problems on arrearages to resume normal banking operation. The program contains a host of measures and incentive mechanisms designed to assist rural banks in the liquidation of their arrearages, at the same time strengthen their financial position (Table 3). As the program is selective, not all rural banks can automatically qualify. As of the end of 1986, of the total 522 applications received, 476 had been approved with only 295 having complied with the requirements or a compliance rate of 56% (Table 4). Although the program's positive impact on the rural financial market is yet to be manifested, it is expected to contribute to a stronger and stable, albeit leaner, rural financial system.

The CALF. Created in 1986 out of the consolidation of the DA's 19 different special credit programs into a single fund, the CALF is operated as a guarantee fund. It indicates the government's recognition of the ineffectiveness and financial burden of targeted credit to specific commodities/end-users and of engaging in direct lending activities.

Barely two years old, the CALF guarantee program has yet to create a substantial impact on the credit market as it is still

being formally introduced to both the banking system and to rural entrepreneurs. A series of seminars by the government and private credit and guarantee agencies is currently being conducted in the countryside for both rural bankers and entrepreneurs. These efforts have yielded some modest accomplishments. As of April 1989, a total of PHP 228.9 million (USD $10.9) loans have been guaranteed. Of these, 38% were loans to some 12,000 small farmers and the rest to other agricultural enterprises principally sugar, livestock, and fresh/marine (Table 5).

Table 3. Main features of the Rural Bank Rehabilitation Program

FEATURES	DESCRIPTION
1. Fresh capital infusion	Upon approval of the rural bank's application by the Monetary Board, new capital in cash equal to at least 10% of the rural bank's supervised credit arrearages with the Central Bank (CB), including accrued interest but excluding penalties, or an amount equal to the deficiency in capital of the bank required to achieve the 10% minimum risk asset ratio, as determined in the latest examination report, whichever is higher, shall be paid into the rural bank by private stockholders, including new and individual corporate stockholders; provided, that another banking institution may invest as a new corporate stockholder subject to existing regulations. Upon meeting this requirement, the participating rural bank may avail itself of the conversion scheme and/or plan of payment hereunder provided.
2. Option for conversion and/or plan of payment	Once the rural bank in question opts to buy into the Rehabilitation Program, it has two options: (a) convert, at par value, all of the supervised rediscount fund arrears to the CB into common stock shares in the name of the Land Bank of the Philippines (LBP); or (b) accept a plan of payment (not exceeding 10 years) and make annual installment payments on the outstanding CB arrears directly to the CB. As long as the repayment plan is complied with, these outstanding arrears to the CB will not appear in the computation of past due ratios. Presumably, if percent of outstanding arrears to the CB is higher than the amount needed to achieve a 10% risk asset ratio, the rural bank would be forced to accept the equity conversion option with the LBP.

FEATURES	DESCRIPTION
3. Increase in authorized capital	In case the conversion scheme will necessitate an increase in the bank's authorized capital, the rural bank shall effect an amendment of its Articles of Incorporation to increase such authorized capital stock to an amount called for under the conversion scheme.
4. Condonation of liquidated damages and/or penalties	Liquidated damages and/or penalties on arrearages subject of the conversion scheme and/or plan of payment shall be condoned in the following manner: a. Liquidated damages/penalties corresponding to the amount of arrearages converted under the conversion scheme hereof shall be deemed condoned as of the date of issuance of shares of stock in favor of LBP. b. Liquidated damages/penalties corresponding to the amount of arrearages covered by the plan of payment, with or without the conversion scheme, shall be deemed condoned as payments are made pursuant to the amortization schedules (in the plan of payment).
5. First option to purchase	Subject to the provisions for the purchase of government share discussed hereunder, the private stockholders of the participating rural bank shall have the first option to purchase, at par value plus a premium of 6% per annum from date of conversion, the common shares held by the LBP under the conversion scheme.
6. Purchase of government shares	a. Once the rural banks opt for the equity conversion route, they are given the right to repurchase this stock and are expected to make equal annual installment payments (not to exceed 10 years) to the LBP to retire the LBP equity in their capital structure. b. Once all the annual installments have been made to retire the outstanding LBP equity, the rural bank regains control of all the LBP stock; however, if the rural bank fails to meet any of its annual installments to the LBP, the LBP can declare the rural bank in default and choose to sell its shares to third parties and generally exercise all rights accorded to it as it presumably would not be free to sell these shares as long as the rural bank is meeting its annual repayment schedule.

FEATURES	DESCRIPTION
	c. During the repayment period, the rural bank presumably cannot gradually reacquire the equity share associated with its annual repayments. It is only able to reacquire the LBP equity after the last repayment has been complied with. Thus, it is associated with its shares until the last installment has been made. This feature was introduced into the conversion repurchase plan to avoid the possibility that the rural bank would stop making its remaining repayment obligations once it would have regained a majority stockholder position. This would leave the LBP with a residual minority equity that would not be met with further repurchase payments.
7. Rediscounting privilege	Rural banks participating in the Rehabilitation Program will be allowed access to rediscount facilities under existing regulations and guidelines. However, they are expected to comply with the following modifications: a. Reduce their current rediscount activity (that had been undertaken under rediscount ceilings of 600% of their net worth savings deposits) down to much lower ceilings, namely only 100% of net worth plus 50% of average time and savings deposits. This brings the rural banks into line with the current rules governing commercial banks' rediscount ceilings. Furthermore, they will be given six years to build-up their local deposit base sufficiently to allow them to meet these lower rediscount ceilings. It is not clear if they are expected to meet annual targets in reaching this new lower ceiling. b. Reduce the loan value of papers eligible for rediscounting from 80% to 60%. This reduction is followed over a six-year period. c. Raise the repayment obligation on rediscount lines outstanding to the CB from 60% to 70% before they can be eligible for access to new rediscount funds. d. Rural banks can impose a flexible penalty rate on past due loans to their clientele. This penalty would be either the difference between the rediscounted loan when it was granted and at the time of payment, or 5%, whichever is higher.

FEATURES	DESCRIPTION
	e. The CB will presumably raise the maximum loan size allowable for rediscounting by the rural banks to take into account the eroding impact of inflation on the nominal values of the old maximum values. f. The CB will impose a penalty rate on rediscounted loans with unremitted collections equal to the current rediscount rate plus five percent.
8. Exemption from equity ceiling	In connection with the infusion of fresh capital, first option to purchase, and purchase of government shares, a 20% ceiling on the voting equity of individual or family group in rural banks shall not apply to stockholders of rural banks participating under this program; Provided, that whenever any or all, as the case may be, of the stockholders exceed the 20% ceiling, such percentage shares may be maintained but may not be increased, and once reduced, the same may not thereafter be increased beyond 20% of the bank's voting stock.

Table 4. Rural Bank Rehabilitation Program status, as of December 31, 1988

ITEM		NUMBER
Total licensed rural banks		1,018
Operating rural banks	840	
Under receivership	178	
Applications Received		522
Applications Approved		476
Rural Banks which have complied with requirements		295
1. With fully infused required capital	224	
2. With 10% payment of total arrearages in lieu of capital infusion	71	
Rural Banks which have partially complied with requirements		53
1. With partially infused capital	51	
2. With partial payment of the 10% of total arrearages	2	
Rural Banks which have not complied with requirements		128
Applications for approval		2
Applications for processing		9
Applications denied/withdrawn/disqualified		27
Applications with deficient documents		8

Source: ACPC, Rural Bank Rehabilitation Program (CB Circulars 1143, 1158, 1172): Update as of 31 December 1988

Table 5. CALF guarantee coverage, by type of commodity, as of April 30, 1989 (in Million Pesos)

	Loan Amount Covered	Percent Share	No. of Clientele Reach	Percent Share
CALF-PCIC	87.925	38.4	11,988	99.6
Cereals & Grains	0.556	0.2	821	0.7
Fruits & Vegetables	27.854	12.2	3,124	26.0
Citrus & Root Crops	5.173	2.2	679	5.6
Commercial Crops	49.388	21.6	7,643	63.5
Livestock & Poultry	2.778	1.2	318	2.6
Fishery	2.176	1.0	142	1.2
CALF-QGFB	112.780	49.3	10	0.1
Coffee	7.230	3.1	5	0 .1
Fiber	2.490	1.1	1	*
Prawns	6.100	2.7	1	*
Sugar	56.960	24.9	2	*
Meat Products	40.000	17.5	1	*
CALF-GFSME[a/]	28.234	12.3	38	0.3
Rice Production	0.250	0.1	1	*
Papaya Farming	1.254	0.5	19	0.2
Fish & Marine	26.230	11.5	17	0.1
Others (Non-Food)	0.500	0.2	1	*
GRAND TOTAL	228.939	100.0	12,036	100.0

a/ Data as of 31 May 1989
** Negligible*

Integrated Rural Financing (IRF) program. The IRF program which started in 1983 is an experimental credit line approach in the extension of financial services to small farm households. The idea is to be able to support a variety of profitable projects in the farm and household including production, post-harvest activities, marketing, and even small

rural non-agricultural enterprises from one program. It is a departure from the commodity-specific approach of supervised credit programs. Further, unlike previous credit programs, it is operated on a selective basis. Participants undertake intensive prior training and seminars on farm enterprise management and value formation related to credit use. As a result, the program is one of the few successful ones (Table 6).

From a very limited coverage, the IRF has since evolved and expanded into a national program. Where before it was run/ managed by a committee based at the Central Bank, its lending functions have been completely transferred to the LBP as part of the general thrust to move government non-financial institutions out of direct lending activities.

Table 6. Summary performance of major credit programs, as of 31 March 1989, preliminary (in Million Pesos)

	No. of Years in Operation	Loans Granted	Loans Matured	Loans Collected	Loans Out-standing	Loans Past Due	Past Due Ratio (%)	Repay-ment Rate (%)
I. ON-GOING AGRI CREDIT/ GUARANTEE PROGRAMS		9,701.84	5,968.75	7,046.09	2,669.24	169.12		
A. Locally Funded Programs/Projects								
1. Integrated Rural Financing Program [a/]	5 yrs. & 9 mos.	70.90	42.80	41.46	29.44	1.64	6	97
2. Guarantee Fund for Small and Medium Enterprises	4 yrs. & 1 mo.	442.22	208.53	151.42	290.80	57 .11	20	73
3. Quedan Financing Programs [b/]		6,111.50	5,581.86	5,510.32	614.67	77.62	13	99
- Grains Businessmen	10 yrs.& 10 mos.	5618.53	5140.53	5076.72	541.81	63.81	12	99
- Farmers' Groups	3 yrs. & 3 mos.	132.98	115.53	114.69	18.29	0.84	5	99

	No. of Years in Operation	Loans Granted	Loans Matured	Loans Collected	Loans Out-standing	Loans Past Due	Past Due Ratio (%)	Repay-ment Rate (%)
- Allied Products	2 yrs. & 10 mos.	63.49	54.49	54.49	9	0	0	100
- Food Market Retailers	4 yrs. & 11 mos.	284.29	260.59	255.75	42.03 [c/]	10.91	26	98
- Food and Agricultural Marketing Enterprises	4 yrs.	12.21	10. 72	8.67	3.54	2.06	58	81
4. Bagong Kilusang Kabuhayan at Kaunlaran: Kabuhayan sa Nayon [b/]	2 yrs. & 9 mos.	28.10	0.00	5.76	22.34	0.00	0	20 [d/]
5. Land Bank: Cotton Financing Program	8 yrs. & 9 mos.	41.08	39.56	26.67	14.41	9.08	63	67
Sub-total		6,693.80	5,872.75	5,735.63	971.66	145.45		
B. Foreign-Assisted Programs/Projects								
1. Cooperative Marketing Project	10 yrs.& 9 mos.	58.61 [e/]	40.26	28.34	30.27	11.92	39	70
2. Agricultural Loan Fund Project [f/]	3 yrs. & 10 mos.	2,407.87	[g/]	1,233.24	1,174.63	0.00	0	100
3. Palawan Integrated Area Development Project	5 yrs. & 9 mos.	12.02	3.09	3.91	8.11	0.15	2	100
4. Agro-Industrial Technology Transfer Program [b/]	4 yrs.	393.50	30.29	21.94	371.56	8.35	2	72
5. Private Sector Modernization Program	5 yrs. & 3 mos.	48.17	15.27	12.67	35.50	2.41	7	83
6. Aquaculture Development Project	4 yrs. & 8 mos.	69.38 [h/]	1.21	5.90	63.48	0.46	*	100
7. Northern Palawan Fisheries Development Project	4 yrs.& 10 mos.	12.66	3.43	2.5	10.16	0.00	0	73
8. Northern Samar Integrated Credit Financing Program	2 yrs. & 6 mos.	5.83	2.45	1.96	3.87	0.38	10	80
Sub-total		3,008.04	96.00	1,310.46	1,697.58	23.67		

	No. of Years in Operation	Loans Granted	Loans Matured	Loans Collected	Loans Out-standing	Loans Past Due	Past Due Ratio (%)	Repay-ment Rate (%)
II. AGRI-CREDIT PROGRAMS WHICH HAVE STOPPED LENDING OPERATION		5,559.72	5,164.75	4,064.54	1,444.65	1,229.27		
A. Locally Funded Programs/Projects								
1. National Agricultural Productivity Programs	4 yrs.	973.99	966.67	534.09	439.90	433.43	99	55
- IRPP		599.94	599.94	351.28	248.66	248.66	100	59
- KCP		356.83	356.83	174.61	182.22	182.22	100	49
- NRPP		8.40	8.40	7.35	1.05	1.05	100	87
- NSPP		1.50	1.50	0.00	1.50	1.50	100	0
- PHFAP		7.32	0.00	0.85	6.47	0.00	0	12 [d]
2. NEDA — Integrated Rural Financing Program	14 yrs.	1,311.44	1,311.44	1,288.90	22.54	22.54	100	98

a/ Data on STD availments of participating rural banks.
b/ Data available as of 31 December 1986 only.
c/ Includes interest, penalties, and surcharges.
d/ Loans collected over loans granted.
e/ Represents approved STDs with CRBs/RBs and investments in the preferred stocks of cooperatives.
f/ Data on STD availments of participating financial institutions as of 30 November 1988.
g/ CB did not specify in their report the amount of loans which have fallen due as of 31 March 1989.
h/ Data presented exclude amount refunded to CB.

Cooperative Rural Bank (CRB) equity build-up program. This program is part of the current efforts to strengthen the CRBs–a sub-system of the rural banking system–via the infusion of additional equity by the DA through the LBP. The equity infusion is intended to enable CRBs to buy the "ticket" for the rehabilitation program. As of June 1989, PHP 15.1 million has been infused as equity to 28 CRBs out of the total sub-system of 29 CRBs.

Grameen Bank replication project. This project is an ACPC-Asia and Pacific Development Center pilot scheme to replicate the operation of the successful Grameen Bank concept in the Philippine setting. It is part of a continuing search for innovative rural financial intermediation schemes. Just eight months old, the replication project is being pilot-tested in four sites in the Philippines, involving non-government organizations and other grassroots organizations. A new ingredient/dimension being introduced is the tying-in of the guarantee concept into the project. Although the results are not expected to be immediately forthcoming, the scheme has attracted much attention as a possible model of a credit delivery system to agrarian beneficiaries under the CARP.

The Livelihood Enhancement for Agricultural Development (LEAD) program. Under the auspices of the DA, the LEAD Program is designed to develop the entrepreneurial capabilities of farmers to enable them to move from their present subsistence stage to one where they can independently sustain a business enterprise. It has two major components: the bank-assisted mode and the grant-assisted mode. The former focuses on viable projects which are collateral- or equity-short. For these kinds of projects, the DA establishes linkages with the banks through the CALF guarantee facility. This supports the non-bankable projects which are provided grants to overcome constraints toward the graduation of these projects/beneficiaries from non-bankability.

Policy issues and problems

The Philippines' experience in subsidized credit presents clear lessons that interventions through the financial market to address rural development objectives are not only ineffective but also have adverse welfare consequences. Although reforms are currently being implemented to strengthen/improve the rural financial system in the Philippines, a number of problems/ issues remain outstanding. These include the following:

First, the need to create an environment conducive to the development of the agricultural sector. Experience showed that no amount of cheap credit can improve the viability of rural producers and projects unless the proper environment conducive to the development of the agricultural sector in general is provided. This underscores the role of credit as a complementary mode of assistance rather than a critical constraint, viable only when the more critical infrastructure and support services are present. What is thus required is the increased provision of rural infrastructure e.g. roads, bridges, communication, etc., and improvement in agriculture's terms of trade through reforms in macroeconomic policies such as overvalued exchange rate, export taxes, and others. Over the last 10 years, government's investment support to agriculture has not only been declining but has also been pushed back to the levels prevailing in the 1950s and early 1960s (Table 7). This trend has to be immediately rectified. Improvements in infrastructure not only generate significant economy-wide multiplier effects (Ahmed, 1984) but also contribute significantly to the reduction of transaction costs and risks in rural lending.

Table 7. Real public sector expenditures in agriculture

Year	Public Sector Expenditures on Agriculture (Million Pesos 1972 Prices)	Public Expenditure on Agriculture As Percentage of		Government Expenditure Bias
		Gross Value Added in Agriculture	Total Government Expenditure	
1960	179	1.9	6.3	0.21
1961	182	1.8	6.1	0.20
1962	206	2.0	6.4	0.21
1963	355	3.2	9.9	0.33
1964	306	2.8	8.4	0.29
1965	265	2.2	7.3	0.24
1966	264	2.2	7.1	0.25
1967	296	2.4	7.2	0.26
1968	416	3.1	8.8	0.31
1969	435	3.2	8.3	0.30
1970	361	2.6	7.1	0.26
1971	452	3.1	8.5	0.31
1972	567	3.8	8.9	0.33
1973	767	4.9	9.0	0.35
1974	1354	8.5	13.0	0.52
1975	1135	6.7	9.9	0.40
1976	1209	6.1	10.0	0.37
1977	1300	6.4	10.6	0.44
1978	1312	6.0	11. 0	0.38
1979	1703	7.5	12.7	0.49
1980	1501	6.3	11.4	0.44
1981	1636	6.6	10.8	0.42
1982	1504	5.9	10.6	0.41
1983	1325	5.3	9.6	0.38
1984	810	3.2	7.3	0.27
1985	747	2.8	6.2	0.21
1986	848	3.1	5.4	0.18
1987	1238	4.4	7.4	0.26
Average				
1960-86	793.9	4.2	8.9	0.32
1960-70	296.8	2.5	7.5	0.26
1970-80	1060.1	5.6	10.2	0.39
1980-86	1195.9	4.7	8.8	0.33

Source: Balicasan (1989)

Second, the need for an intensive rural savings mobilization for the development of an effective rural financial system. Empirical evidence (Rodriguez, 1988; TBAC-UPBRF, 1981) reveal that rural households are capable of generating substantial amounts of savings. It is then a matter for rural financial intermediaries to mobilize these through appropriate financial innovations, e.g. through the issuance of direct securities with appropriate features that match rural household characteristics/preferences.

Third, the need to reorient rural banking practices and procedures consistent with the nature and characteristics of rural transactions. Experiences on rural banking clearly identify the unsuitability of the formal delivery system for rural lending. There is, therefore, a need to explore innovative intermediation schemes that can significantly contribute to the reduction of costs of lending.

Fourth, the need for continuing efforts to improve farmers' creditworthiness and bankability through: (i) training on building credit awareness, loan acquisition skills, and financial discipline; and (ii) organization through the encouragement and support for non-formal financial intermediaries e.g. cooperatives, credit unions, Rotating Savings and Credit Associations, and others. Government participation in these activities, however, should be limited to the provision of technical services, e.g. training etc., to preclude politicization of these institutions.

Fifth, the need to provide mechanisms/facilities for term transformation of the agricultural loan portfolios of financial institutions to support long-term capital investments in agriculture. The need for long-term investments in capital equipment becomes pressing as agriculture develops and

overcomes the "first generation" problems related to production. This can be addressed through the increase in the capitalization of existing guarantee institutions especially the GFSME.

Sixth, the need for continuing reforms on banking policies and regulations as well as fiscal policies that hamper increased market efficiency. The long awaited relaxation of bank branching regulation, the abolition of the Agri-Agra Law, the 15% gross receipt tax on financial intermediaries, and the 20% final withholding tax on interest income on deposits, among others, require appropriate action.

Finally, although outside the realm of this topic, is the need to guard against policy reversals through legislative initiated actions. Judging by the actions of Congress, it is clear that the lessons learned have not been universally understood such that the possibility of reversal in policy poses as much concern as the short-term effects of on-going reforms.

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CHAPTER 6

Sources and strategies for resource mobilization in rural financial markets[1]

V. Bruce J. Tolentino, Jocelyn Alma R. Badiola, Raquel A. Banaag, Flerida C. Chan, and Marife T. Magno[2]

A healthy and vigorous rural financial system is essential for progressive rural and agricultural development. Government policy must be structured so that free entry into the enterprise of providing financial services is ensured, and thus the costs of such services to users are competitively minimized. Government must also provide the appropriate regulatory framework to encourage stability and discourage abuse within the system. Private initiative is also encouraged in the competitive, stable, and disciplined atmosphere fostered by this government policy. Such entrepreneurship results in the formulation of innovative mechanisms for financial intermediation for the transfer of resources from surplus units to deficit units, from savers to users, and from lower-yielding to higher-yielding investments.

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[2] Undersecretary, Policy and Planning, Department of Agriculture; Project Development Officer V; Project Evaluation Officer V; Project Planning Officer V; and Supervising Financial Management Specialist, respectively, of the Agricultural Credit Policy Council.

The task of this paper is to present a bird's eye view of the savings/fund mobilization side of formal banking, the so-called "forgotten half" of finance, in the rural areas of developing countries. In banking terms, this is the liabilities side of the bank's operations (Vogel and Burkett, 1986). The exposition uses much well-known material and is aimed at the participants of the Food and Agriculture Organization-sponsored Fifth Technical Consultation on the Scheme for Agricultural Credit Development, most of whom are practitioners concerned about expanding their thinking about bank finance, with the objective of generating more resources for lending for rural development. The literature on savings has examined saving behavior from both the national (macroeconomic) and the household or firm (microeconomic) points of view. While the studies on the macroeconomic level have been quite extensive and the research into household behavior less adequate, the examination of forms of saving by households has been quite limited. This, in spite of the observation that financialized household savings, circulating in the financial system, are the more critical fuel for growth (Chan and Tolentino, 1990).

Such is reflected in Table 1, where the high growth countries show greater levels of money in relation to Gross Domestic Product. This is the concept of "financial deepening" which is the process facilitated by the "financial liberalization" called for by McKinnon and Shaw (1973).

Table 1. Savings and Growth in Developing Countries, 1965 to 1987

Country group by growth rate of Gross Domestic Product (GDP)	Gross National Savings (GDP)	Gross Investment (GDP)	Change in GDP/ Investment*	M2IGDP**
HIGH GROWTH (over 7%)				
7 Countries	28.0	28.6	26.3	43.0 a/
Excluding China	23.2	26.7	33.1	-
MEDIUM GROWTH (3-7%)				
51 countries	18.5	22.6	23.6	31.2
LOW GROWTH (less than 3%)				
22 countries	19.0	19.0	10.1	23.8

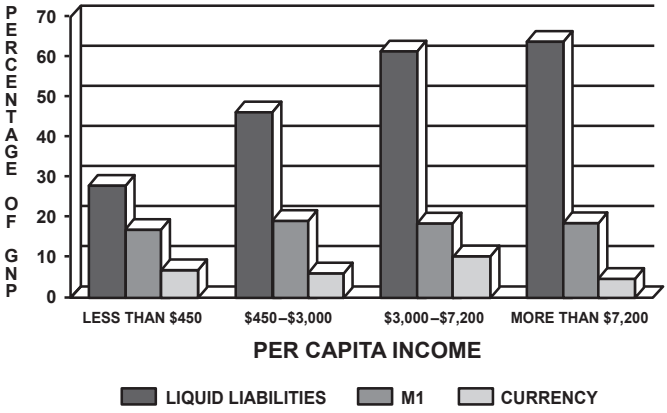
Note: Data are weighted averages times 100 and are based on a sample of 80 developing countries
** Investment - Gross Domestic Investment*
*** M2IGDP - Currency circulation + Demand Deposits + Time Deposits + Savings Deposits at banks.*
a/ Average is for 1971-1987 only.
Source: IMF International Financial Statistics and World Bank data.

Financial deepening

Financial deepening is required for an efficient exchange and trade in the economy. Given a responsive and dynamic financial sector, the money values of commodities and services can easily be expressed and communicated, and the trade and exchange of such goods and services between economic agents can be performed at minimal transaction costs.

One of the principal characteristics of an economy of adequate financial depth is the ratio of money in circulation to the total value of production. Money in circulation may include

the components of M1, or currency and demand deposits or broader definitions, over the Gross National Product. It is observed that higher-income, progressive economies typically exhibit larger ratios than slower-growing economies, as shown in Figure 1 (Lamberte and Lim, 1987).



Source: Neal as cited in World Development Report, 1989.

Figure 1. Indicators of financial depth

Finance at the frontier

The financial intermediation process performs two important functions: savings mobilization and credit allocation. Banks, in order to be effective financial intermediaries, should generate deposits and transform these into loans.

Supply-led finance: The experience

In general, financial intermediation in the rural areas of less developed countries has been primarily focused on credit allocation. Many governments have viewed rural financial

policy as "supply-leading," as one of principally providing loans. It has been widely held that rural households cannot save money due to poverty. This led to the distorted perception that banks are merely sources of loans and not stewards of deposits. Thus, credit was priced cheaply at low interest rates in the expectation that in agriculture, low-income farmers would adopt more modern farming methods, increase their productivity, and achieve higher incomes. As a result, commodity-specific agricultural credit programs dominated rural financial market policy and the portfolios of rural banks.

A critical consequence of this policy was the failure of rural banks to actively pursue savings mobilization, leaving the intermediation process less effective and efficient (Rodriguez-Badiola and Tolentino, 1990). The cheap credit strategy's effectiveness was short-lived. Eventually, the policy failed as the supply of government funds for lending diminished and loan default rates rapidly grew, while the health of rural banking systems deteriorated (Adams, 1978; Graham, 1984; Tolentino, 1987; Von Pischke, 1978).

Attempts at financial reform

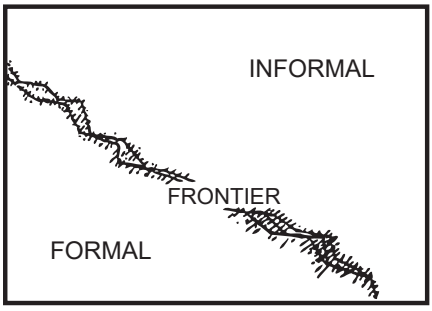
Economists, policymakers, and even private bankers responded to the crisis in rural finance by instituting reforms in the rural financial market. One of these reforms included the suspension of direct lending by governments.

Under the reforms, only financial institutions are encouraged to lend, the funds for which should be generated principally from private deposits and government resources. Research supports the finding that rural households can and do save given the proper opportunities and incentives (Gupta, 1970; Kelley and Williamson, 1968; Ong et al., 1976; TBAC and UPBRF, 1981).

Financial reform

The principal task of financial reform–that of encouraging financial deepening, which clearly involves pushing back the "frontiers of finance"–of enlarging the scope of the formal financial system, and thus reducing the size of the informal financial system and economy (Fig. 2).[3] The informal system, otherwise called the "black market," the "curb market," and the "underground economy," has been found to grow under conditions and policies which restrict and over-regulate the formal system.

With the formal system being "repressed," the informal system flourishes, thereby providing the alternative to the stifled formal system. This exacerbates financial "shallowing" and undermines monetary management. More importantly, the informal system is less influenced by the traditional tools of monetary and economic policy (discount rates, open-market operations, and reserve requirements), and is thus less responsive to initiatives which encourage deposits in formal banks and the subsequent availability of such funds to finance development.



The concept of "finance at the frontier" is due to Von Pischke (1989). The illustration is borrowed from Lamberte (1988).

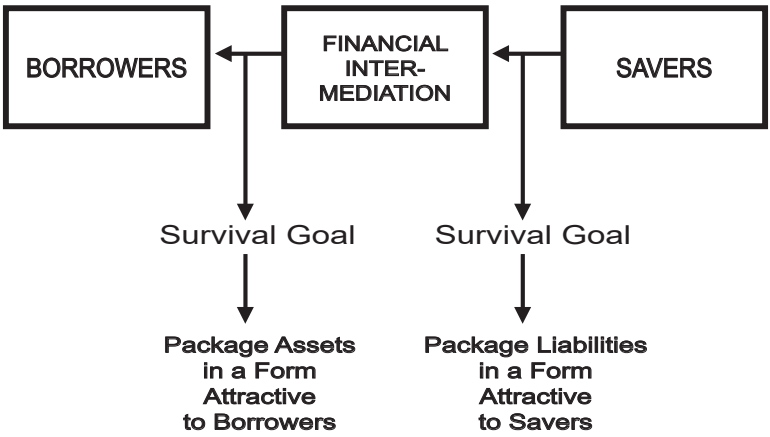
Figure 2. Finance at the frontier

[3] The concept of "finance at the frontier" is due to Von Pischke, 1989

Intermediation and liabilities in banking

Banks as financial intermediaries channel funds from "surplus units" to "deficit units," or from savers to investors (Fig. 3). The "units" may be individuals, households, firms, or government agencies. Banks thus act as conduits between savers and investors. As businesses, banks have to sell services to both depositors and borrowers. To savers, banks have to present deposits and other financial services which savers value: security, convenience, and profit. To investors, they have to provide loans at "easy" terms and minimum cost. Therefore, banks have to balance the interests of savers and borrowers, and earn a margin in the process.

A bank's principal assets are loans and their liabilities, and deposits. The focus of this paper is the bank's liabilities. The scope and complexity of the liabilities held and managed by banks have grown over time.



Source: Sinkey, 1983.

Figure 3. The process of financial intermediation

Today, even in developing countries, a bank's liabilities are no longer simply deposits but also deposits of various maturities and features, depending on the source and expected use.

Whatever these liabilities may be, however, the principal features in bank liability management are these three interrelated and mutually dependent aspects (Sinkey, 1983):

- The minimization of deposit interest costs;
- The commitment to serve the loan needs of customers; and
- The minimization of the costs and constraints of government regulation.

Minimizing deposit interest cost

The basic principle behind the minimization of deposit interest cost is the ability of the bank to categorize its total pool of depositors according to interest-sensitivity. Thus, the bank varies interest rates on deposits to fit with the behavior of their depositors. Transactions deposits are normally rate-insensitive. Minimum-size requirements on deposits or withdrawals, lack of competition, ignorance, high transaction costs, and other factors increase rate insensitivity.

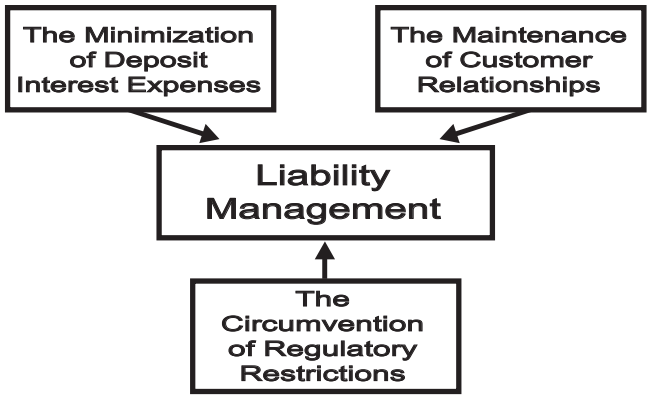
Serving the "best" customers

Banks, like most other businesses, prefer to provide the "best" levels of services to their "best" customers. Long-term, mutually profitable relationships are thus developed, resulting in arrangements such as prime rates for loans and/or deposits. Banks may even choose to utilize relatively high-cost deposits to service the loan needs of their prime customers in order to retain their business.

Surviving government regulations

Behavior under the constraints and the fulfillment of government regulations cost money. Such regulations include deposit rate ceilings, reserve requirements, deposit-insurance fees, and monitoring and reporting requirements. Deposit rate ceilings limit the banks' capacity to attract deposits. Reserve requirements are a tax, specifically when such reserves earn interest rates at less than market levels. Deposit insurance may be too expensive for the risk cover provided. Finally, regulations often make banking tasks more costly in terms of time, administrative overhead, and personnel.

The facets of bank liability management apply principally to developed-country banking (Fig. 4). Clearly absent from the list of liabilities which banks in least developed countries also manage are government deposits. This is particularly true in economies that have had some experience and history in specialized, government-funded programs.



Source: Sinkey, 1983.

Figure 4. The three facets of bank liability management

The Philippines, for example, is a typical case where special windows for rediscounts and direct lending were opened as a result of the country's adoption of the "supply-leading" strategy of financial development. The best-known of these rediscounting-based programs was the Masagana 99 program for rice, where after providing initial seed funds–"special time deposits" at below-market rates for rice loans to rural banks– the Central Bank rediscounted the resulting loan documents, again at subsidized interest rates. Similar programs were also established for corn, various types of livestock, poultry, vegetables, fisheries and aquaculture, tobacco, and cotton as well as for the projects of cooperatives, rural youth, and farmers' and women's groups (Annex A). With the programs' implementation, however, rapidly deteriorating repayment rates and weak portfolios quickly dissipated the funds and forced their closure. By 1986-1987, most of these programs and their remaining balances at the Central Bank were consolidated into the Comprehensive Agricultural Loan Fund (CALF).

Aside from this, many other government agencies established special lending programs directed at their particular clientele (Annex B) which became part of their extension functions. About 30 of these programs were set up in the departments (ministries) of agriculture, fisheries, natural resources, trade and industry, local government, and even education. As in the case of the Central Bank's rediscounting programs, mounting arrearages, poor financial control, and lack of clear accountability eventually forced the closure and consolidation of many of these funds.

A typology of bank liabilities

Bank liabilities are of many types, depending on the typology employed. The classifications may be according to geographical origin, stability over time, or ownership. Deposits may also be generated from the public, the government, or from other financial institutions. Moreover, in developing countries, donor funding has become an important source of deposits, particularly in support of "supply-leading" credit programs.

In general, banks are the traditional type of financial institutions known as depository financial institutions since their liabilities are almost wholly deposits. Non-depository institutions, on the other hand, generate their funds as premiums, contributions, or shares.

The funds generated by non-depository financial institutions may, of course, be deposited in depository institutions, while those collected by depository intermediaries may be invested in non-depository financial firms. Thus, it is a critical aspect of resource mobilization to target the generation of deposits that are long term and institutional in character, especially the pension, trust, or non-transactions funds.

A listing of these typical types of financial institutions and their major sources of funds is summarized in Tables 2 and 3.

Table 2. Depository financial institutions and their instruments

Type of Institution	Major Sources of Funds*
1. Commercial Banks	● Demand Deposits ● Savings Deposits ● Time Deposits ● Non-deposit Sources ● Loans ● Trust Funds
2. Thrift Banks	● New Accounts ● Savings Deposits ● Time Deposits ● Loans ● Trust Funds
3. Credit Unions / Cooperatives	● Deposit Shares ● Loans ● Trust Funds ● Deposits

** These funds may come from Individuals, businesses, corporations, governments, and donors.*

Source: Sinkey, 1983

Table 3. Non-depository financial institutions and their instruments

Type of Institution	Major Sources of Funds
INSURANCE COMPANIES	
1. Life	● Policy Premiums
2. Property and Casualty	● Policy Premiums
PENSIONS/RETIREMENT FUNDS	
1. Private	● Fund Contributions
2. National and local governments, and government agencies	● Fund Contributions
FINANCE COMPANIES	
1. Sales and Consumer	● Commercial paper ● Long-term debt (bonds)
INVESTMENT COMPANIES	
1. Money-market Funds	● Shares
2. Mutual Funds	● Shares

Savings mobilization policies and strategies

Analysis and experience have accelerated a shift from the provision of loans to the mobilization of savings in the thinking about rural finance. The shift has resulted in four major benefits:

- A realization that the bulk of savings and deposits in most countries originates from households (UNESCAP as cited by Adams, 1978);
- That, unlike taxation, savings mobilization is a voluntary process;
- That financial intermediaries serve more savers than borrowers–by a ratio of about 20 to 1; and
- That banks which are "saver-dominated" are less dependent on volatile, politically sensitive government funds, and are thus much more stable (Von Pischke et al., 1983).

Given these benefits, how can banks encourage more deposits from the community? How can governments build and maintain an environment conducive to savings and investment? There are actions that can be implemented by the banks themselves on the microeconomic level or by government, nationally on the macroeconomic level. Furthermore, new and innovative institutional arrangements can be organized to pool limited savings together into loan funds of significant sizes. It must be emphasized that the difference between the microeconomic and the macroeconomic tools is crucial. The micro approach accepts the macro environment as a given and attempts to survive within it. The macro approach attempts to modify the environment in the first place.

Microeconomic incentives

Assuming a commonly shared economic environment, banks can implement a wide range of deposit-generation schemes. These include:

- Raising deposit interest rates;
- Reducing customer deposit transaction costs;
- Awarding prizes for deposit accounts or increases;
- Awarding prizes for deposit stability;
- Providing gifts for new or increased deposits;
- Instituting larger minimum balance or minimum maturity rules; and
- Building customer confidence and goodwill toward the bank.

The successful implementation of these programs enables the banks to generate more resources for lending, compared to other banks operating under the same circumstances. As individual enterprises, however, banks are unable to change the overall macroeconomic situation. Government, employing its fiscal and monetary influence, creates the macroeconomic atmosphere for intermediation.

Macroeconomic incentives

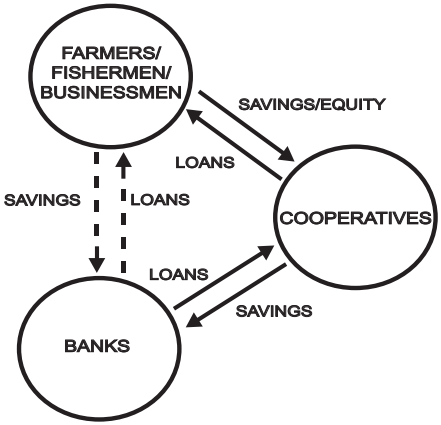
In order for the government to encourage the entire financial system to generate more savings for investment, major changes in the overall financial policy must be ensured. These include:

- The enactment of a more flexible interest rate structure, one which ensures positive real deposit rates;
- The liberalization of entry into deposit-services, including those of cooperatives; and
- The institutionalization of a well-run deposit insurance and prudential regulation system.

Of course, rural savings mobilization efforts are only sustainable in the context of general macroeconomic stability, rapid agricultural growth, and rising rural incomes. These general preconditions are necessary for savings mobilization to be successful over time.

Alternative institutional arrangements

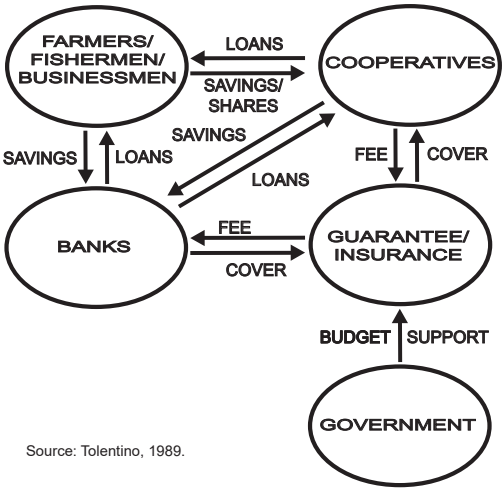
Intermediaries pool the idle funds of savers and lend these out in lump sums to borrowers. Formal, larger intermediaries, usually banks, face constraints which less formalized institutions are free from, like regulation by Central Banks. This is where the advantage of semi to informal institutions is evident, since cooperatives can provide financial services to even the small savers and borrowers. Credit unions can pool the meager savings of small rural dwellers and provide loans to other farmers and small entrepreneurs. The cooperatives can then attain the size of operation needed to have transactions of a formal bank (Fig. 5).



Source: Tolentino, 1989.

Figure 5. Cooperatives and banks

Another indirect way to support and expand lending is by government's provision of limited-risk guarantees and/or crop insurance. These provide at least partial substitutes for collateral. Thus, even high-risk borrowers with no collaterable assets are able to borrow (Fig. 6).



Source: Tolentino, 1989.

Figure 6. Guarantee/insurance schemes.

It must be noted, however, that cooperatives do not provide miracle cures, contrary to the impression given by some of the literature and programs arising from some less developed countries. Cooperatives have problems and limitations unique to their forms, which also pose constraints to large-scale replication.

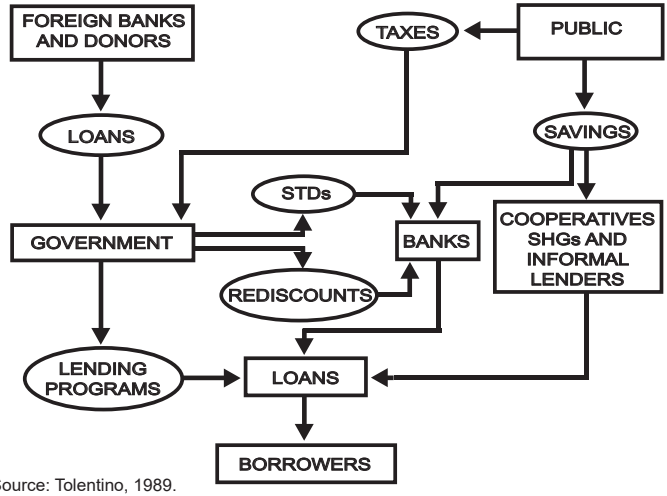
Some experiences in deposit mobilization

Bankers and even governments have often doubted the effectiveness of rural savings mobilization because of the perception that rural households cannot save due to low incomes. Governments also believed in this difficulty and on that basis instituted the "supply-leading" policies and mechanisms of credit provision, highlighted by the organization of specialized credit programs and the use of government budgetary resources for direct lending (Fig. 7).

With direct government intervention, funds were channeled through routes other than savings and financial institutions. The government utilized their publicly entrusted authority to impose taxes and borrow from both domestic and international banks to generate funds. These funds were then pushed through government-managed lending programs which linked with borrowers directly or provided "special" time deposits with banks which then lent these out under government-mandated guidelines (Fig. 8).

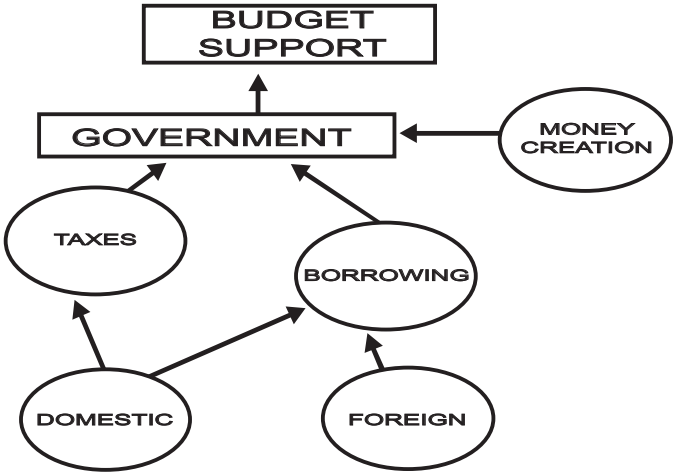
The experience with these programs has, with only rare exceptions, been dismal. Most programs became unidirectional flows of resources from government to borrowers via specialized intermediaries which came to a halt once the loan funds dried up.

Ongoing research, however, indicates some success in the rural financial markets of less developed countries such as Peru, the Dominican Republic, Bangladesh, and the Philippines.



Source: Tolentino, 1989.

Figure 7. Flows in the financial system



Source: Tolentino, 1989.

Figure 8. Fund flows in public directed lending programs

The Banco Nacional para las Cooperatives (BANCOOP)

In Peru, the BANCOOP campaigned for savings deposits in two rural regions. Despite an adverse economic environment that consisted of high inflation rates, negative real growth, and tight competition from other financial institutions, the savings campaign of BANCOOP was a success since it was able to attain a significant rise in its level of deposits. More importantly, the BANCOOP's dependence on the government and international donors for subsidized funds was reportedly lessened and its financial viability was significantly improved through increased profits and reduced loan delinquency (Vogel, 1984).

The Banco Agricola

Another successful case was that of the Banco Agricola of the Dominican Republic. Specifically, the number of its savings accounts rose by a remarkable 287% from 5,313 to 20,539 after less than a year of the implementation of its deposit mobilization project. The volume of its savings deposits also grew by 263% from RD$ 1 million to RD$ 4 million, while time deposits increased from RD$ 2 million to RD$ 3 million (Vasquez, 1986).

The Agrani Bank

Meanwhile, the Agrani Bank of Bangladesh reported increased volumes of deposits in the amount of Tk 1.4 million during its campaign for deposits in 1986 through its many branches. The increase represented at least 8% of a branch's deposit base (Ahmed and Khaled, 1987).

Philippine Rural Banks

In the Philippines, the Central Bank launched the National Savings for Progress Campaign in June 1973 to attract deposits from both the urban and rural areas. During the pre-campaign period, monthly deposits averaged PHP 160 million only but in the post-campaign period, monthly deposits averaged PHP 1,300 million or a total increase of 92% in the level of deposits of the total banking system. However, there has not been any other study that documents specific saving schemes implemented by banks in rural areas alone.

In addition to the cases cited above, similar experiences of successful deposit mobilization campaigns have been recounted in Indonesia, India, Nepal, Pakistan, Sri Lanka, Malaysia, Thailand, and the Fiji Islands in the Pacific (APRACA, 1985). Clearly, substantial volumes of savings exist in the rural areas and under certain conditions, with some savings flowing into financial institutions.

Conditions for successful savings mobilization

A successful savings mobilization program should reflect the needs and preferences of the rural population to be served (Akaan et al., 1987). Banks should develop an effective strategy for attracting substantial deposits from the rural household sector.

Khalily, Meyer, and Hushak (1987) have outlined the fundamental ingredients for a successful savings mobilization strategy:

- Better quality banking services that reduce paperwork, simplify procedures, and offer more cordial relationships between bank employees and depositors;
- Savings campaigns or publicity to increase the awareness of the rural community about banking;
- Innovative approaches in rural banking such as the concept of mobile banking. This is expected to reduce transaction costs for both depositors and banks and may even motivate rural women to hold deposits in banks;
- Flexible interest rate policy so that interest rates can adjust more effectively to changes in inflation;
- Flexible banking hours that put into consideration the erratic nature of rural economic activities, additional incentives to depositors like prize bonds, and greater accessibility to loans; and
- More incentives to bank employees in the form of cash bonuses and promotions to encourage them to put more effort into seeking out customers and providing better services to them.

Some countries have implemented a combination of the factors listed above. The successful deposit mobilization program of Peru's BANCOOP was attributed to the relatively high interest rates offered on time and savings deposits, the confidence of depositors in the financial institution, and the good service provided by the bank staff (Vogel, 1984). The Banco Agricola in the Dominican Republic traced its excellent deposit performance to the bank's vast network of branches, the strong bank-client relationship established through years of service, and an attractive savings gimmick that conducted quarterly raffle draws among its depositors (Gonzalez-Vega, 1987).

In Bangladesh, three savings models were tested: (a) the depositor-focused approach; (b) the marketing model which conducted house-to-house campaigns; and (c) the employee incentive model which provided bonuses to bank personnel who brought in new accounts or additional deposits (Ahmed and Khaled, 1987). In the Philippines, the national savings campaign operated within a framework of nationwide advertising via television, newspapers, radio, and other promotional materials. Moreover, regional savings drives, bank manager workshops on savings, and a school savings project were undertaken in selected areas of the country.

While it is quite difficult to isolate the impact of these strategies on the level of deposits held by banks, Vogel (1984) attempted to analyze the extent to which the raising of interest rates and the promotion of banking services could have an influence on the deposit performance of the BANCOOP. He tested an econometric model that included these two schemes as explanatory variables. These variables were found to have exerted a significantly positive impact on deposit mobilization in addition to factors external to the bank such as income, inflation, attitudes of households, and literacy.

Similarly, an econometric model with the level of deposits as dependent variable was estimated in Ghana, Africa. Among the explanatory variables were deposit interest rates and the attitudes of bank employees toward servicing the financial needs of households. A positive and significant relationship between deposits and these factors was determined in a regression analysis.

The research results imply that rural areas have savings that can be mobilized through rural financial markets. For financial institutions to succeed as savings mobilization conduits, they

should reflect the banking needs and preferences of the rural population to be served. The success of any savings program would thus depend on a host of factors, both financial and non-financial.

Summary and conclusions

Savings mobilization plays a critical role in the financial intermediation process. Banks need to generate savings as a primary source of funds for lending. However, as a result of the supply-leading approach to rural development, many less developed countries neglected savings mobilization and focused largely on credit allocation. In effect, the intermediation process was distorted, contributing to the inefficiency of the rural financial market. As a consequence, financial reforms were necessitated, emphasizing the encouragement of rural savings mobilization among banks, in complementation with credit allocation, for an effective and efficient rural financial market.

Research and experience show that banks can mobilize savings successfully in rural areas under certain conditions that include an effective saving strategy, a favorable economic environment, and a strong commitment by bank management with respect to the implementation of mobilization strategies. Under the Rural Savings Mobilization Experiment of the Agricultural Credit Policy Council, for instance, the majority of banks that implemented savings schemes experienced growth in their deposits. In general, the strategies which minimized the depositor's transaction cost attracted the greatest volume of deposits. The other schemes that successfully increased the

volume of deposits of rural banks included intensive savings campaigns or information drives, events that offered prizes to depositors such as raffle draws, the raising or maintenance of interest rates at levels significantly higher than those offered by other banks, and the provision of incentives to bank employees to encourage them to solicit deposits. Strategies that required personal contact with the public seemed to have been most effective.

For those banks that achieved either relatively small increases or negative growth rates in their deposit levels despite efforts to campaign for deposits, a number of reasons were cited, including: (1) lack of commitment of bank management in the implementation of schemes; (2) adverse economic environments such as a sharp decline in farm output or income as a result of calamities; and (3) the existence of other attractive sources of loanable funds.

In sum, there exists a substantial potential for financialized savings in the rural areas which can be mobilized through rural financial markets. The extent to which this savings potential can be harnessed would depend on the savings opportunities and incentives made available to the public. A savings mobilization scheme will, however, fail if the bank does not have the confidence of the public, if it does not commit itself fully to the implementation of the savings strategy, and, of course, if the public itself is unresponsive due to general economic difficulties. This means that savings mobilization depends on both financial and non-financial factors, on both microeconomic and macroeconomic conditions including bank stability, and an economic environment conducive to savings generation and intermediation into productive investment for economic growth.

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Annex A

Rediscounting programs in the Philippines

Name of Program	Implementing Agency	Fund Source	Eligible Beneficiaries
1. Masagana 99 (M-99)	Department of Agriculture / National Agriculture and Food Council (lead agency)	Government of the Philippines	Rice farmers
2. Maisagana	Department of Agriculture / National Agriculture and Food Council (lead agency)	Government of the Philippines	Corn farmers in all regions except Region 3
3. Gulayan sa Kalusugan	National Agriculture and Food Council	Integrated Agricultural Financing Fund / Agricultural Loan Fund: Integrated Rural Financing	Vegetable growers in Regions 1,2,3,4,5,6,9,10, and 11
4. Supervised Credit for Orchard Crops	Central Bank of the Philippines, Rural Bank of the Philippines, Bureau of Plant Industry	Government of the Philippines	Fruit producers
5. National Soybean Production Program	Department of Agriculture / National Agriculture and Food Council, Central Bank of the Philippines	Yellow Corn Fund: Ministry of Agriculture and Food	Soybean growers in 17 selected provinces
6. IAF-Virginia/ Burley Tobacco Financing	Central Bank of the Philippines, Philippine Virginia Tobacco Administration	Integrated Agricultural Fund: Philippine Virginia Tobacco Administration	Tobacco growers in Ilocos Norte, Ilocos Sur, Pangasinan, La Union, Abra, Mindanao
7. PTA-Supervised Farm Credit Assistance for Native Tobacco	Philippine Tobacco Administration	Agricultural Loan Fund: Philippine Tobacco Administration	Tobacco growers
8. National Rootcrop Production Program	Department of Agriculture / National Agriculture and Food Council, Central Bank of the Philippines	Yellow Corn Fund: Ministry of Agriculture and Food	Potato and cassava growers

Name of Program	Implementing Agency	Fund Source	Eligible Beneficiaries
9. Kalabaw ng Barangay	Central Bank of the Philippines, Bureau of Animal Industry	Integrated Agricultural Financing Fund / Agricultural Loan Fund: Integrated Rural Financing	Carabao breeders
10. Bakahang Barangay (Cow/Call)	Central Bank of the Philippines, Bureau of Animal Industry	Integrated Agricultural Financing Fund / Agricultural Loan Fund: Integrated Rural Financing	Cattle raisers
11. Bakahang Barangay (Fattening)	Central Bank of the Philippines, Bureau of Animal Industry	Integrated Agricultural Financing Fund / Agricultural Loan Fund: Integrated Rural Financing	Cattle fatteners
12.Kambingang Barangay	Central Bank of the Philippines, Bureau of Animal Industry	Integrated Agricultural Financing Fund / Agricultural Loan Fund: Integrated Rural Financing	Goat raisers
13. Biyayang Dagat	Bureau of Fisheries and Aquatic Resources	Fishery Loan Guarantee Fund	Fishermen
14. CB-DECS Supervised Experience Educational Program	Central Bank of the Philippines, Department of Education, Culture and Sports	Government of the Philippines	Agriculture Students
15. Kabataang Sakahan para sa Kaunlaran: Out-of-School Youth (KASAKA OSY)	Central Bank of the Philippines, Department of Agriculture	KASAKA: OYS	Out-of-School Youth on Agri-business projects
16. Intensified Rice Production Program	Department of Agriculture / National Agriculture and Food Council, Central Bank of the Philippines	Yellow Corn Fund: Intensified Rice Production Program	Rice farmers in 30 selected provinces

Name of Program	Implementing Agency	Fund Source	Eligible Beneficiaries
17. Expanded Corn Program	Department of Agriculture / National Agriculture and Food Council, Central Bank of the Philippines	Yellow Corn Fund: Ministry of Agriculture and Food	Corn farmers in 46 provinces
18. Cotton Financing Program	Philippine Cotton Corporation, Central Bank of the Philippines	Agricultural Loan Fund: Philippine Cotton Corporation	Cotton producers
19. Grains Quedan Financing	Quedan Guarantee Fund Board	Government of the Philippines Fund Earning	Franchised bonded warehousemen
20. Agricultural Loan Fund Project	Central Bank of the Philippines	International Bank for Reconstruction and Development, United States Agency for International Development	Single proprietorship, partnerships, corporations or cooperators
21. Integrated Rural Financing Program	Land Bank of the Philippines	Department of Agriculture / Comprehensive Agricultural Loan Fund	Farmers with landholdings of 7 hectares (P.D. 27), 5 hectares or less
22. Industrial Guarantee and Loan Fund	Central Bank of the Philippines / Department of Local Government	World Bank	Manufacturing concerns and those service industries supportive of manufacturing activities such as warehousing, repair shops, and others

Note: Programs numbers 1 to 19 are STD-funded which were eligible for discounting up to 1983 (CB Circular 1086).
Source: Profile of Agricultural Credit Programs, Agricultural Credit Policy Council. Philippines

Annex B

Seed funding programs in the Philippines

Name of Program	Principal Implementing Agency	Fund Source	Eligible Beneficiaries
1. Kilusang Kabuhayan Kaunlaran (KKK)	KKK Secretariat	Government of the Philippines	Small entrepreneurs
2. Pagkain ng Bayan	Pagkain ng Bayan	Government of the Philippines	Provincial/City government constituents
3. Taal Lake Development Program (TLDP)	Farm Systems Development Corporation-TLDP	Government of the Philippines	Small-scale fishermen along Taal Lake
4. Coastal Area Resource and Enterprise (CARE) Development Program	Farm Systems Development Corporation	Government of the Philippines	Coastal fishermen
5. Laguna Lake Cooperative Development Program	Farm Systems Development Corporation, Laguna Lake Development Authority	Government of the Philippines	Lakeshore residents along Laguna Lake
6. Cooperative Development Loan Fund (CDLF)	CDLF, Ministry of Agriculture and Food	Government of the Philippines	Registered cooperatives and Samahang Nayon groups
7. Samahang Nayon Support Program	Bureau of Agricultural Cooperatives Development	Government of the Philippines, United States Agency for International Development	Samahang Nayon groups
8. Cooperative Marketing Program	Bureau of Agricultural Cooperatives Development, Central Bank of the Philippines	Government of the Philippines, United States Agency for International Development	AMCs, SNs, and other cooperatives in 15 provinces

Name of Program	Principal Implementing Agency	Fund Source	Eligible Beneficiaries
9. Palawan Integrated Area Development Project (PIADP)	PIADP Office, Central Bank of the Philippines	Asian Development Bank, Central Bank of the Philippines	Farmers engaged in agricultural products and plantation crops in Palawan
10. Farm Systems Development Corporation Programs	Farm Systems Development Corporation	Government of the Philippines	Integrated Services Associations
11. Philippine Aquaculture Development Project	Central Bank of the Philippines, Department of Agriculture-Bureau of Fisheries and Aquatic Resources	Asian Development Bank	Residents of Aklan, Capiz, and Iloilo; process owners of fishponds
12. Agro-processing and Marketing Project: National Food Authority: Private Sector Modernization Program	Agro-processing and Marketing Project Office / National Food Authority	Asian Development Bank	Farmer-cooperatives of modular farm fanner associations; Individual farmers
13. Agro-processing and Marketing Project: National Food Authority: Thresher Amortization Program	Agro-processing and Marketing Project Office / National Food Authority	Asian Development Bank	Regular assignees of NFA milling contracts
14. DBP's Special Agricultural, Small and Medium Industries Lending (A-Smile)	Development Bank of the Philippines	Social Security System	Entrepreneurs engaged in projects related to agriculture, manufacturing, and trading
15. Bagong Kilusang Kabuhayan at Kaunlaran - Kabuhayan sa Nayon	Technology and Livelihood Resource Center	National Livelihood Support Fund	Preferably clients of TLRC; those with no outstanding loan in arrears in any BKKK lending program; residents in urban areas

Name of Program	Principal Implementing Agency	Fund Source	Eligible Beneficiaries
16. Laguna de Bay Fishpen Development Project	Laguna Lake Development Authority	Government of the Philippines / Asian Development Bank	Resident-fishermen In Laguna Lake area
17. Quedan Financing for Food and Agricultural Marketing Enterprises	Quedan Guarantee Fund Board	Government of the Philippines Fund Earnings	Non-scale type proprietors are priority borrowers (the business must be existing)
18. Northern Palawan Fisheries Development Project	Philippine Fisheries Development Authority	Asian Development Bank / Government of the Philippines	Fishermen in project areas who passed the eligibility criteria
19. Livelihood Enhancement for Agricultural Development	Department of Agriculture	Government of the Philippines	Farmers' organizations, fishermen's groups
20. Dispersal Loan Program	Bureau of Animal Industry	Government of the Philippines	Member of cooperative/farmers' organization for at least one year
21. CDLF-BANKOOP-CRB: Capital Infusion Program	Department of Agriculture / Agricultural Credit Policy Council – Comprehensive Agricultural Loan Fund	Comprehensive Agricultural Loan Fund	Cooperative Rural Banks
22. CDLF-BANKOOP-SANDUGUAN: Rice Seed Production Project	Department of Agriculture / Agricultural Credit Policy Council – Comprehensive Agricultural Loan Fund	Comprehensive Agricultural Loan Fund	Identified Sanduguan farmer-members
23. Export Industry Modernization Project II	Technology and Livelihood Resource Center	Overseas Economic Cooperative Fund of Japan	Small- and medium-scale entrepreneurs

Name of Program	Principal Implementing Agency	Fund Source	Eligible Beneficiaries
24. Northern Samar Integrated Credit Financing Program	Visayas Cooperative Development Center	Coop Fund	Landless workers, tenants, and fishermen
25. Tulong sa Tao Program	Department of Trade and Industry – Bureau of Small and Medium Business Development	Government of the Philippines	Micro entrepreneurs, including government retirees (civil and military) and political ex-detainees
26. Countryside Economic Development Program	Philippine Coconut Authority, United Coconut Planters Bank	Philippine Coconut Authority	Coconut farmers owning less than 20 hectares of land planted to coconuts
27. National Livelihood Support Fund -Wholesale Lending Program	Office of the President / National Livelihood Support Fund	Consolidated Funds of the Kilusang Kabuhayan at Kaunlaran	Must have no outstanding loan on any KKK/NLSF project; family income of individual borrowers or beneficiaries of borrower must be below the poverty threshold
28. The Small and Medium Industry Loan Program: A LBP-SSS Partnership	Land Bank of the Philippines	Social Security System	Sole proprietorships, partnerships, and/ or corporations with assets and/or sales of at least PHP 5 M, which are involved in: a) at-business, b) manufacturing, c) utilities, d) transportation and communication, e) commercial production particularly of food and other basic consumer items, f) export-related businesses

Name of Program	Principal Implementing Agency	Fund Source	Eligible Beneficiaries
29. BKKK Balikbayan sa Kabuhayan	Technology and Livelihood Resource Center	National Livelihood Support Fund	Preferably clients of TLRC who do not have any outstanding loan in arrears in any BKKK lending program
30. Agrarian Livelihood Program	Agrarian Livelihood Program Office	BKKK Secretariat	Agrarian reform beneficiaries in 10 provinces
31. Financial Incentives for Economic Livelihood Development Scheme for Small Coconut Farmer's Organizations (FIELDS-SCFO): A PCA-LBP Tie-Up	Philippine Coconut Authority, Land Bank of the Philippines	Philippine Coconut Authority	Small coconut farmer beneficiaries who are active members of accredited farmers' organizations and operate coconut farms of 10 hectares
32. Agro-Industry Technology Transfer Program	Technology and Livelihood Resource Center	Overseas Economic Cooperative Fund of Japan	Producers/processors of agri or aqua-based projects

Note: Lending programs implemented since 1973 other than those which utilize rediscounting facilities.

Source: Profile of Agricultural Credit Programs, Agricultural Credit Policy Council (ACPC). Philippines.

CHAPTER 7

Income, savings, and deposit performance: Evidence among rural households in the Philippines

Flerida C. Chan and V. Bruce J. Tolentino[1]

Introduction

Despite the limitations inherent in savings and income data, there is general agreement that savings and income are positively related. Substantial literature reports empirical findings which establish the relevance of income in making decisions on saving. However, the determination of the proportion of savings that should be financialized or held in cash or cash deposits is not well understood, particularly in developing countries like the Philippines.[2] Because financialized savings is a critical factor in financial and economic development, policies designed to mobilize deposits can be more successful if deposit behavior is better understood. Moreover, as the market for bonds and

[1] Respectively, Economist IV, Agricultural Credit Policy Council, and Undersecretary for Policy and Planning, Department of Agriculture. The authors wish to acknowledge the comments and suggestions of Mr. Emmanuel Esguerra, Mr. Aniceto Orbeta, Mr. Francisco Dakila, and Dr. Richard Meyer. Credit is also due to Mr. Rebec Fernandez for his assistance in the regression runs.

[2] The terms "financialized savings" and "deposits" are used interchangeably throughout the discussion.

equities is quite rudimentary in countries like the Philippines (Lamberte, 1985), financialized savings is an important indicator of the level of monetization and the effectiveness of financial intermediation in an economy.

The growing importance of mobilizing deposits, particularly in the countryside, is recognized: first, the sources of funds of the rural banks [3], thought of as the primary conduits of loanable funds in the countryside, have declined over the years with the recent (1981-onward) market-oriented interest rate and "no direct lending" [4] policies. Hence, the urgency of tapping other fund sources and private deposits to generate loanable funds has become critical for the rural banks. More importantly, the potential for savings in the rural areas is now widely acknowledged as substantial (Sacay, Agabin, and Tanchoco, 1985). These savings are, however, mostly held in physical rather than financial form.

While efforts have been undertaken by both the government and the private sector to direct savings through the normal intermediation process, there is still a pressing need to clearly identify those factors that determine a successful deposit mobilization program. Lamberte and Lim (1987) believe that studies on savings behavior in the country do not give a good picture of the savings patterns in the rural sector. They point out that research has focused only on farm households, failing to consider differences in the cash flow patterns between farm and non-farm households. Meyer and Alicbusan (1984) also noted the heterogeneity of the economic activities of rural households. Such variations could provide opportunities for financial intermediation even in the same locality.

[3] Rural banks are private unit banks established in the countryside.

[4] "No direct lending" refers to prohibitions against government line agencies performing financial functions and taking full risk for these functions.

This paper attempts to describe the nature of the financialized savings behavior of rural households in the Philippines. The relationship between financialized savings and income for both farm and non-farm households will be analyzed. Some of the questions dealt with in this paper include: Is income the most significant determinant of the level of deposits among rural households? In what ways does the level of income affect the households' deposit behavior? How does the source of income influence the level of financialized savings among households? Do farmers save more than professionals? Do wage-earners save more than self-employed households? In what forms do rural households save? Does the form of saving vary across income sources?

The paper is organized into six sections. The first reviews the related literature and presents different views in the empirical aspects of the relationship between savings and income and the deposit decisions of households. The second describes the nature of the survey data examined in the analysis while the third describes the model and the methodology adopted in the analysis. The fourth section describes the structure, level, and form of income and financialized savings of rural households. The fifth section discusses the empirical results of the model and the last section presents some policy recommendations.

Review of related literature

Savings and income relationship

Two issues complicate research on savings and income: one is the adoption of an appropriate definition of savings, and two is the selection of the most relevant income variable that best

describes the relationship. Most studies have established the positive influence of income on household savings behavior. However, Clar de Jesus and Tolentino (1990) cautioned that these results may be misleading unless the income effect is isolated from the effects of other environment factors which may enhance (push) or weaken (pull) the effect of income. Indeed, increases in personal income alone do not necessarily mean increased savings (Sideri, 1984). Sideri (1984) also stressed that structural reforms in the agriculture sector such as along infrastructure and land redistribution are more important to ensure a successful savings mobilization program.

Savings in developing countries. Mikesell and Zinser (1973) and Snyder (1974) comprehensively reviewed studies which examined household savings behavior in developing countries. Snyder's review focused on household savings behavior while Mikesell and Zinser evaluated savings behavior both at the macro and micro levels. Snyder cautioned that due to data inadequacies, most of the literature defined savings as the residual of income minus consumption. He suggested the use of "wealth" as an alternative variable for income since its positive influence on household savings behavior has been validated by some researchers. Researchers like Friend and Taubman (1966) noted the negative influence of wealth on savings while Kelley and Williamson (1968), Snyder (1974), and Ong, Adams, and Singh (1976) indicated the insignificance of the wealth variable in explaining savings behavior. In general, it appears that the exact relationship between wealth and savings has not been clearly established by empirical studies (Clar de Jesus and Tolentino, 1990).

Mikesell and Zinser (1973) also recognized the inadequacies in and lack of comparability of savings data in developing countries. They counseled caution in evaluating savings behavior based on aggregate savings data, noting that:

a) Ex-post savings which is actually a statistical residual does not provide a true measure of savings effort;
b) The measurement of marginal savings ratios which makes use of year-to-year differences in aggregate savings estimates could be subject to a high degree of error; and
c) The derivation of aggregate savings estimates may necessitate more than one basis of approximation; when the estimates are compared, this could result in substantial differences in the savings estimates obtained from different data sources.

Savings and current income. Tests of the Keynesian absolute income hypothesis have already established that income is indeed a statistically significant determinant of savings. A summary of findings of broad-based works published during the 1960s is presented in Table 1. These studies suggest that the average propensities to save (APS) in developing countries is particularly erratic and that marginal propensities to save (MPS) is an increasing function of income at lower levels of development. Moreover, the savings–income relationship is relatively weak in these countries when compared with that of the more developed countries.

Empirical research in which savings was defined not as a residual but as the change in net worth (Ramanathan, 1969; TBAC-UPBRF, 1979) and which took into account changes in physical/financial assets, borrowing, lending, outflow and inflow of capital transfers, and depreciation (Nandal, 1972) also appear to confirm the positive relationship between savings propensities and levels of current income. Note that some studies confirm variations in savings behavior. Table 2 summarizes the MPS estimates showing differences in the savings propensities of households deriving income from different sources and households categorized by urban and rural dimensions.

The studies generally show that current income is a significant variable in explaining savings behavior. Nevertheless, the evidence suggests variations in the estimated savings propensities. Various authors (Snyder, 1974; Williamson, 1969) attributed the weak savings–income relationship in developing countries (relative to the more developed ones) to factors such as aggregation bias in the data, errors in the variables, and the different definitions of savings used by the authors. Moreover, when estimates of MPS using cross-section versus time-series data are compared, it appears that the former provides higher estimates. The differences between the average and marginal propensities are larger in cross-sectional than in time-series studies. Nevertheless, these differences tend to disappear over time (Mikesell and Zinser, 1973; UN Secretariat, 1980).

Savings and permanent/transitory income. Friedman's Permanent Income Hypothesis (PIH) is the starting point to test a number of savings–income specifications. It considers both permanent and transitory incomes as explanatory variables in analyzing household savings behavior. The literature indicates that the PIH provides a better parameter to determine savings behavior. The definition and measurement of permanent income is, however, dependent on the available statistical information (Mikesell and Zinser, 1973). In general, empirical testing of the PIH appears to provide support for Friedman's hypothesis. Most of the studies attest to the significance of permanent income in savings behavior. A summary of empirical evidences testing the relationship between permanent/transitory income and savings is provided in Table 3.

Measurement of permanent income. In the validation of the PIH, there are several methods which could be utilized to measure permanent income: (a) use of a moving average;

(b) "cell" mean approach; and (c) income-estimating function. Appendix A provides a brief description of each of the estimation procedures.

There have been numerous studies that estimated levels of permanent income using a moving average ranging from two to four years (Williamson, 1968; Gupta, 1970a; Friend, 1966; Friend and Taubman, 1966; Gupta, 1970b). In general, these approaches confirm the positive effect of real income in explaining savings behavior.

Bhalla (1978) also confirmed Friedman's hypothesis that differences in savings propensities are observed due to differences in the variability of income streams. This finding is also consistent with the positive relationship between agricultural income and savings. However, he pointed out that this does not support the hypothesis that entrepreneurial income is directly related to savings. More recently, Bhalla (1980) tested a general model of savings behavior among Indian households, finding that:

a) Permanent and transitory incomes provide a better determination of savings than current income;
b) Two different definitions of permanent income provide robust results in household savings behavior;
c) The MPS out of transitory income is higher than the MPS out of permanent income but less than one; and
d) Savings rates (marginal and average) are not independent of the level of permanent income but tend to increase with permanent income and approach an asymptotic value.

In contrast, the study conducted by the Technical Board for Agricultural Credit and the University of the Philippines

Business Research Foundation (TBAC-UPBRF) in 1981 indicated mixed results. Using 1978 data, the study found that the MPS out of transitory income was not substantially different from that of permanent income. However, 1977 data showed relatively larger estimates of MPS out of transitory income.

Finally, Ramanathan (1969) and Betancourt (1971), using the "cell mean" approach, provided estimates that also validated the PIH. A summary of selected studies that measured savings propensities out of permanent and transitory incomes is provided in Table 4. The empirical results show that the estimates of the MPS out of permanent and transitory incomes are relatively heterogenous across countries. However, it appears that irrespective of the definition and the method of measurement of permanent income used by the researchers, empirical evidence supports Friedman's PIH.

The relationship between deposits and income

While literature on savings behavior is large, empirical studies on deposit behavior are quite scant. Burkett and Vogel (1985) observed that most macro and micro studies on savings focused on total savings and neglected the allocation of savings between financial and non-financial forms. Srinivasan and Meyer (1986), echoing Burkett and Vogel, noted that empirical evidence on financial savings or deposits is very limited. Results of their empirical test of data on four South Asian countries indicate that deposits respond positively to income, access to banking facilities, and the rate of interest paid on deposits. They argued, however, that in the short run, there is little that can be done to accelerate deposits by raising income. They further said that policies on bank branching and interest rates could have greater and more immediate impact on rural deposits.

Using the framework developed by Wai (1972), Vasquez (1986) attempted to capture both the economic and non-economic determinants of deposit decisions. He showed that the important determinants of financial deposits were the level of household income and interest rate. His findings suggest that rural deposits are more income-elastic than urban deposits. Also using Wai's framework, Khalily (1987) tested a simultaneous equation model for interest- and non-interest-bearing deposits of bank branches in rural Bangladesh. The endogenous variables are deposits and number of bank branches. Two definitions of district income were adopted – permanent and absolute. Khalily's results suggest that a two-way causality between interest-bearing deposits and bank branches exists. Khalily stressed that transitory income positively influences interest-bearing deposits, implying that rural folks tend to save more out of transitory income. Permanent income was not found to be a statistically significant determinant of interest-bearing deposits. Permanent income exhibited its influence through the bank branch equation. Khalily's work also revealed that the non-interest-bearing deposit model did not exhibit a strong two-way causality between the two functions. Permanent and absolute incomes were found to be the significant variables in the deposit function. As in the interest-bearing deposit model, income effects were indirectly reflected through the bank branch function.

Testing for different functional forms, Khalily and Meyer (1989) analyzed the factors which influence demand for rural deposits in Bangladesh. Their study provides support for PIH, implying that rural households use deposits to offset income fluctuations and/or to meet unexpected contingencies.

Earlier studies reviewed by Lamberte and Lim (1987), which examined the determinants of household financial savings, used bank deposits as a proxy (Table 5). They noted, however,

that this proxy has its limitations since it includes the deposits of corporations and institutions as well as government deposits which are held mostly for transactions purposes. In general, these researches provide evidence that income is positively related to financial savings.

Empirical research conducted by Akaah, Dadzie, and Dunson (1987) also indicated the positive influence of income on bank savings propensities of Ghanaian cocoa farmers.

In the Philippines, pioneering research into the patterns and determinants of financial savings in the rural areas was undertaken by the TBAC-UPBRF in 1979 and 1981. The 1979 study found that rural bankers believe that the primary factor which determines the level of bank deposits is income. The 1981 study revealed the following:

a) Only 24-31% of all sample households maintained bank deposits during the period covered by the study;
b) Financial assets consisting of cash, bank deposits, and loans/receivables comprised only 2% of total assets;
c) Deposits in banks accounted for about 40% of total financial assets;
d) High-income farm households save more with banks, but still low-income farm households have positive balances with banks; and
e) Regressing bank deposit balances of farm households with income and interest rate, income was found to have a positive effect on bank deposit balances.

Interest rates, transactions costs, and financial savings. While this paper focuses on the savings–income relationship, the effects of interest and transactions costs on savings are briefly discussed. The responsiveness of financial savings to

interest rates is an issue which has remained an empirical question. Magno and Tolentino (1990) noted that despite the conflicting results provided by researchers, two factors affect the interest rate and financial savings relationship. One, the size of the income and substitution effects, to the extent that it is influenced by the weight of the savers and borrowers in the market and the net income effect for savers. Two, the existence of financial repression within the country which can distort real returns and render economic incentives ineffective. With respect to transactions costs, Magno and Tolentino (1990) also noted that no direct estimates of the effects of transactions costs on deposits are available in the literature. Nevertheless, indirect estimates of the effects of transactions costs used by Meyer and Srinivasan (1986) and Burkett and Vogel (1986) have shown that transactions costs influence deposit decisions.

Notes on the collection and measurement of income, savings, and deposits in the survey data

The data and data sources

The data used for this paper were obtained from the Rural Savings Mobilization Research Program of the Agricultural Credit Policy Council (ACPC) and the Philippine Institute for Development Studies, in collaboration with The Ohio State University. The research program has two major components: the bank-level component and the household sector. This paper focuses only on the household level data collected by the ACPC during the last semester of 1987.

A pre-tested questionnaire was administered to the sample households. It sought information on the households' (a) demographic characteristics; (b) agricultural production income and expense statement; (c) non-agricultural sources of income; (d) asset and liability structure; (e) annual expenditure patterns; (f) savings, borrowing, and lending profile; and (g) attitudes and perceptions of households on savings, borrowing, and investment for the calendar year 1986. This paper concentrated on income and financialized savings data. The areas covered by the survey were as follows:

Island Group	Region	Province	Municipalities
Luzon	I	Pangasinan	Alaminos, Sual
	IV	Batangas	Mataas na Kahoy, Lipa, San Jose
	V	Camarines Sur	Goa, San Jose, Tigaon
Visayas	VI	Iloilo	Barotac Nuevo, Dumangas, Sta. Barbara
	VII	Negros Oriental	Siaton, Valencia, Zamboangita
Mindanao	X	Misamis Oriental	El Salvador, Gitagum, Initao

A total of 1,000 households were randomly selected and interviewed. The sampling design is provided in Appendix B. Using income as a classificatory variable, 16 households were found to be outliers and were excluded from the analysis.

Measurement of income and financialized savings

Rural household income. Alamgir (1976) raised several issues in the measurement of income used in various studies on rural income and savings. Among these are:

a) Whether depreciation attributable to fixed farm assets is deducted or not from gross receipts;
b) Confusion on whether different items or activities such as borrowings, sale of assets, drawing down on past

savings, and net current transfers should be included in the estimation of gross receipts;

c) Exclusion of the imputed value of family and purchased labor and materials in the creation of physical assets;
d) Inclusion of the value of fodder crops (both products and by-products);
e) Reconciling the definition of household income obtained from survey data with the national account concepts and measurement; and
f) Difficulty in distinguishing new construction from repairs/ maintenance both conceptually and statistically.

In this study, limitations inherent in the data made it difficult to adopt a concept of household income which considers all the issues cited above. Some of these limitations include errors and omissions inherent in enumeration activities, possible underestimation (in the case of income and savings), and possible overestimation (in the case of expenditures) of respondents' responses.

Information on the imputed value of family labor, which was considered as part of the household's production expenses, was excluded in the computation of net income due to the inadequacy of data gathered. For instance, imputed wage rates for family labor varied significantly among households within an area. Income used in the analysis considers only all incomes earned by the households during the reference period, net of production and operating expenses.

Appendix C provides a detailed definition and list of activities included in each category of income. Income sources are categorized into agricultural versus non-agricultural income. Comparative income statistics is also provided by occupational source of household head and by depositor and non-depositor

classifications. The measurement of income used in the regression estimates was categorized into current income (Y), permanent income (Y_P), and transitory income (Y_T). To test for income variability, incomes of the households were further classified into agriculture (Y_A) or non-agriculture income (Y_{NA}) and income from employment (E) and self-employment (SE).

Savings/deposit levels. Data on household savings was measured by deducting consumption expenditures from gross income. There are limitations in the use of this approach, as pointed out by Alamgir. It would be difficult to cross-check underestimation in income and overestimation in expenditure. The use or the nature of assets acquired is not indicated. The data captured consumption expenditures of households on a monthly basis, which was then annualized. For expenditures which are not incurred monthly, the households were asked to give an annual estimate of such expenses. Expenditures include those on food, house rent/repairs, fuel, electricity, water, purchases/repairs of household furnishings/appliances, expenses on household operations (salaries of househelp), purchases of clothing, personal/medical care expenses, transportation and communication expenses, educational expenses, taxes, and other miscellaneous expenditures such as contributions/donations during fiestas, birthdays, and anniversaries, entertainment, cigarette and gambling expenses.

Financial assets are defined as the amount of deposit balances of the sample households in bank and non-bank institutions. These consist of their balances in savings, time and demand deposit accounts in banks, and savings/equity contributions in non-bank institutions. The same definition applies for financial deposits. Data on financial assets was available only for one period. Cash on hand was excluded due to unreliability. Financial holdings such as bonds, shares of

stocks, and insurance policies held by the rural households were also excluded since these are only a negligible portion of the households' total assets.

The net worth method was not used for two reasons: (a) unavailability of a two-period information on some of the critical variables; and (b) unreliability of data gathered in some of the balance sheet accounts like cash on hand.

The model and method of analysis

The econometric model

The household's savings, S, is a function principally of household income, Y. Thus, the general savings function is:

$$S = f(Y) \qquad (1)$$

Where:

S = savings
Y = income

Savings (S) can either be financial (FS), which are usually bank and non-bank deposits, or non-financial savings (NFS), which maybe work animals or consumer durables.

As development proceeds, the proportion of savings in financial form rises. The focus of interest is the financialized savings behavior of the households. Hence, a general deposit function is proposed:

$$FS = F(Y) \qquad (2)$$

Where:

FS = financialized savings or deposits
and where: $\frac{FS}{Y} > 0$

The level of income is expected to be the most significant determinant of the level of financialized deposits and savings of the households. Several deposit and savings functions were estimated, taking into consideration the nature and character of the income of the households (e.g. income source, permanent vs. transitory income) which could affect the proportion of savings held in financialized savings or deposits.

Aside from the pure income savings and deposit models, additional variables were included to test the effects of other factors on the savings and deposit behavior of the households. These variables include household demographic characteristics (reflected in educational attainment and dependency ratio) and the opportunity of the households to maintain surplus funds and financial savings (reflected in the presence and accessibility of depository institutions in the sample areas and the interest rate variable). The basic savings model is thus:

$$S = a + b_0 Y + b_1 INT + b_2 DEPR + b_3 EDUC + b_4 INCTYPE + b_5 OCCUP + e \qquad (3)$$

where:

Y = current income
INT = average interest rate on deposits reported by households
DEPR = dependency ratio
EDUC = highest educational attainment of household head

INCTYPE = a dummy variable for major income source which takes the value of: 1 = agriculture; and 0 = otherwise
OCCUP = a dummy variable for major occupation of i household head which takes the value of i =1 .... n
OCCUP1 (farmers) = 1; 0 = otherwise
OCCUP2 (fishermen) = 1; 0 = otherwise
OCCUP3 (livestock/poultry raisers) = 1; 0 = otherwise
OCCUP4 (farm laborers) = 1; 0= otherwise
OCCUP5 (wage earners) = 1; 0 = otherwise
OCCUP6 (entrepreneurs) = 1; 0 = otherwise
OCCUP7 ("others") = 1; 0 = otherwise
e = error term

On the other hand, the deposit model is:

$$FS = a + b_0 Y + b_1 INT + b_2 DEPR + b_3 EDUC + b_4 INCTYPE + b_5 OCCUP + b_6 DIST + b_7 NBANKS + e5 \quad (4)$$

where the other variables are defined as in the savings model and the additional variables are:

DIST = distance of depository institution to household residence
NBANKS = number of banks in the municipality

Given the assumption that the households' decision to save is a two-stage process–households decide on how much to save and then decide on how much to allocate to financial savings, two analytical procedures were applied for the deposit model. First, logit regression was employed to predict the probability of a household having bank deposits. Second, ordinary least squares (OLS) was applied to determine the effect of income on the level of financial savings.

The logit model was used to test the households' desire to save in financial or non-financial form. Savings then becomes the decision variable S_d, which takes a value of 1 if the i^{th} household chooses financial assets and 0 if otherwise. The total sample of 974 households was used to determine which variables affect their decision to deposit. This means that the i^{th} household unit is a depositor, that is:

S 0 = 1; 0 otherwise

The logit procedure indicates the probability that the household will select an alternative form of asset. Consider that if S_d = 1, the beta coefficient represents the effect of income on the probability of a household holding his surplus funds in the form of financial savings. Each variable can be treated separately since a ceteris paribus assumption is adopted.

For the OLS regression model, S takes a continuous value of the households' total deposits in bank and non-bank financial institutions. In this case, the depositor sample of 157 households was used in the deposit functions to test whether income and non-income variables determine the level of financialized savings or deposits.

Definitions of variables

Dependent variables

Financialized savings (FS), the average amount deposited by the sample households in bank and non-bank institutions during the reference period January to December 1986. This would include deposits they made in their savings, time, and demand deposit accounts in banks, and saving/equity contributions in non-bank institutions. In the logit procedure, FS is a dummy

variable which takes the value of 1 for depositor and 0 for non-depositor.

Household savings (S), savings as a residual of income less consumption:

Independent variables

Income, categorized as:

a) **Current Income** (Y), equal to total net income derived by the households from all income-earning activities during the reference period. Income increases mean more savings and deposits for the households.

b) **Permanent Income** (Y_P), from Hyun, Adams, and Hushak (1979) some "permanent" characteristics of households were regressed against current income. Rodriguez (1988) documented the savings behavior of Philippine rural households by estimating permanent income using the values of physical assets and financial assets, educational attainment of household heads, household size, dependency ratio, and major occupation of the household head. The YP used in the model adopts this definition. The effect of permanent income is also expected to be positive.

c) **Transitory Income** (Y_T), derived by deducting permanent income from current income. As with permanent income, transitory income is expected to positively influence savings and deposit behavior.

d) **Major Income Source** (INCTYPE), whether agriculture or non-agriculture income and whether employed or

self-employed. These were used as a proxy for income variability. These were assigned a value of unity for agriculture and zero, otherwise.

- **Agriculture Income** (Y_A), income derived from crop, livestock/poultry, and fish production. Off-farm activities such as earnings as hired labor in other farms, rental income, and other activities undertaken by respondents in the farm other than his own are included.

- **Non-Agricultural Income** (Y_{NA}), income obtained from salaries/wages/ craft/self-employment/ business and grants/pensions and remittances received.

- **Employment** (E), salaries and wages from employers.

- **Self-employment** (SE), including earnings derived directly from one's own business, trade or profession.

e) Major Occupation of Household Head (OCCUP), seven occupational categories: farmers, fishermen, livestock/ poultry raisers, farm laborers, wage earners, craft/ businessmen/ entrepreneurs, and "others." The "others" category includes income derived from gambling commissions, rental of farm equipment, practice of professions, and pensions.

For the logit regression, households were categorized into five income groups:

Sample Size		Income Level	Description
All	Depositors		
492	52	1	Household with income less than or equal to PHP 10,000
270	44	2	Households with income between PHP 10,001 and PHP 20,000
144	39	3	Households with income between PHP 20,001 and PHP 40,000
57	16	4	Households with income between PHP 40,001 and PHP 70,000
11	6	5	Households with income greater than PHP 70,000

With level 1 as the reference income, income becomes a dummy variable which takes the following values:

HHCODE 1 = 1 for income level 2; 0 otherwise
HHCODE 2 = 1 for income level 3; 0 otherwise
HHCODE 3 = 1 for income level 4; 0 otherwise
HHCODE 4 = 1 for income level 5; 0 otherwise

The same categories were adopted for permanent income and the households were distributed as follows:

Sample Size		Income Level	Description
All	Depositors		
318	23	1	Household with income less than or equal to PHP 10,000
501	86	2	Households with income between PHP 10,001 and PHP 20,000
144	44	3	Households with income between PHP 20,001 and PHP 40,000
9	3	4	Households with income between PHP 40,001 and PHP 70,000
2	1	5	Households with income greater than PHP 70,000

Nominal Interest Rate (INT), nominal interest rates on savings deposits as reported by the households were used since only two households maintained time deposit balances. The average interest rates for the areas were imputed to households which failed to report interest rates.

Dependency Ratio (DEPR), the ratio of the number of dependents to the household size.

Education (EDUC), defined as the highest educational attainment of the household head. This was used as a continuous variable for the OLS regression model. However, for the logit regression model, it was transformed into a categorical variable with the following levels:

Sample Size		Level	Description
All	Depositors		
695	94	Unschooled/ Elementary	Household with no formal schooling or with 6 years of schooling
216	40	High School	Household with 7-10 years of formal schooling
63	23	College	Household with atleast 7 years of formal schooling

These became dummy variables with:

EDUC I = if in high school; 0 otherwise
EDUC 2= if in college; 0 otherwise

Distance from Depository Bank (DIST), as a proxy for bank accessibility, this was defined as the distance (in kilometers) of depository institutions to household residence.

Number of Banks (NBANKS), another bank accessibility factor defined as the number of existing banks in the sample areas.

Structure and level of income and deposits of rural households

This section describes the most important variables in this study: income, savings, and deposits of rural households. Income is analyzed according to the following dimensions: by geographic distribution, demographic characteristics of households, occupational type, and income grouping. The same dimensions also apply to the patterns and levels of savings or deposits.

Composition and levels of income of rural households

Income levels by area. The sample households were concentrated in Batangas and Iloilo. These provinces captured about 27% and 20% of the total sample, respectively (Table 6). Misamis Oriental had the smallest share, constituting only about 10%. Of the 974 respondents, only 16% have deposit balances in bank and non-bank institutions.

The majority of depositors were from Batangas, Pangasinan, and Iloilo. This is not surprising since these provinces were among the more progressive in terms of per capita income. In addition, the presence of more financial institutions in these areas indicates that the degree of monetization is relatively high vis-a-vis the rest of the sample areas. Only about 7% of the households in Camarines Sur saved with depository institutions. This is also expected since the sample municipalities in this province were classified as less progressive (Clar de Jesus and Tolentino, 1990).

The overall mean income amounted to PHP 14,555 per household. Depositors have relatively higher average incomes

of PHP 21,404 as compared with PHP 13,013 for non-depositors. The highest average incomes were reported in Batangas (PHP 28,360) while the lowest average income was posted by depositors from Negros Oriental (PHP 11,637).

Income levels, by demographic classification. Male-dominated households comprised 88% of the respondents (Table 7). Consequently, most depositor households are headed by males. Note that among non-depositors, female-dominated households have higher incomes. This could be due to the multiplicity of jobs women take to meet the family needs and their innate ability to manage the household's finances. This is an interesting result since female-headed households are expected to be poorer.

Average household size was reported to be six. The average number of dependents per household was four. Both parameters were the same regardless of depository status. Depositors are a little older than non-depositors with an average age of 49 and 47 years, respectively.

The highest average incomes ranging from PHP 21,000 to PHP 25,000 were reported by depositor households belonging to the 31–60 age bracket. This supports the life-cycle hypothesis that surmises that at these age levels, families tend to save more than the households belonging to the younger income bracket, in preparation for retirement. There is also a direct relationship between household size and income which may be explained by the fact that there are more members that work and members who may take on multiple jobs to augment their income.

In general, the higher the educational attainment of household heads, the higher the income of the households. Among

depositors, however, unschooled households ranked second in terms of mean income, next to households who have reached or completed a college education or higher. Of the total respondents who have reached tertiary education, only about 37% are depositors. This pattern shows that non-depositors have more years of schooling than depositing households. A plausible explanation for this is that the former invests more in education rather than earmark this as financialized savings. Non-depositors could view education as a form of savings which would yield them a higher return in the future compared with placing their surplus funds in depository institutions.

It also appears that higher levels of education do not necessarily encourage deposit activity. More educated households are possibly aware of higher yielding financial instruments aside from deposits in which they invest their surplus funds. It seems that more educated households are less prone to money illusion as well and would rather save in non-financial forms as an inflation hedge. It is also possible that households with more members in school spend a larger portion of income on education.

Income levels, by major occupation of household head and income source. Forty-four percent of the household heads reported farming as their major occupation (Table 8). They, however, constitute only 14% of the total farmer-respondents who are depositors. Wage earners, livestock and poultry raisers, entrepreneurs, professionals, pension earners, and households whose major income sources were classified under "others" make up a large proportion of respondents who are depositors. Two plausible factors could be attributed to this: one, these households may not have a good opportunity to save in physical form, and two, their residences maybe closer to a bank which makes their savings transactions costs lower.

Among depositors, livestock/poultry raisers reported the highest average income of PHP 32,187. Ranking second are grant/pension earners whose average incomes were placed at PHP 31,889. Households engaged in farming, fishing, and hired as farm laborers obtained the lowest mean income valued at less than PHP 20,000. Among non-depositors, the highest average income was reported by livestock/poultry raisers followed by entrepreneurs, while the lowest average income was posted by farmers.

When categorized by major income source, 53% of the total sample households derived income from agricultural activities (Table 9). Except for Misamis Oriental where there are more depositors whose predominant income source is agriculture, all areas reported more depositors whose incomes were earned from non-agricultural sources. Average incomes of all households obtained from non-agricultural activities were generally higher regardless of depository status. This suggests that non-agricultural activities have been an important source of earnings for rural households. This also reflects that rural households are either shifting to non-agricultural livelihood activities or diversifying their sources of income.

Income levels by income class. Households were clustered around incomes ranging from PHP 30,000 and below (Table 10). This represents about 88.5% of the total sample which implies that the majority of the households belong to the relatively lower income group. However, as a proportion of total households, depositors are overrepresented in the higher income categories. With the exception of depositor households belonging to income class PHP 20,001 to PHP 30,000 and incomes of more than PHP 70,000, depositors have generally higher mean incomes across the income groupings.

Patterns and forms of savings and financialized deposits of rural households

Deposit pattern by area. Of the 157 households with financialized savings (with bank and non-bank deposit balances), 124 (79%) saved only in banks, 21 (13%) saved in non-bank institutions, and 12 (18%) maintained balances in both (Table 11). Almost four-fifths of savers are bank depositors. Most of these depositors are in Batangas, Iloilo, and Pangasinan.

The highest average financialized savings was reported for Batangas at PHP 2,529 which also accounted for the highest average income (Table 12). This was even higher than the average for the total sample that was estimated at PHP 1,865. Ranked second and third in terms of average values reported were Negros Oriental (PHP 2,468) and Pangasinan (PHP 2,206). Misamis Oriental depositors reported an average deposit balance of only PHP 318, about 80% of which were maintained in non-bank institutions.

Average bank and non-bank deposit balances. The disaggregation of deposits into bank and non-bank balances reveals that bank balances were higher than non-bank balances. Of the total outstanding financialized savings, 93% were maintained by respondents in banks while only 7% were kept in informal savings institutions. Average bank deposit balances were highest in Negros Oriental (PHP 3,387), Batangas (PHP 2,935), and Pangasinan (PHP 2,244). On the other hand, non-bank balances were highest in Pangasinan (PHP 1,312), Camarines Sur (PHP 1,285), and Iloilo (PHP 1,185). While Negros Oriental households posted the highest bank deposit balance (which was almost twice as high as the national average), they also reported the lowest average

non-bank deposit balances of PHP 170. Misamis Oriental depositors, on the other hand, posted one of the lowest balances both in bank and non-bank institutions (PHP 90 and PHP 455, respectively).

Looking at the total number of deposit accounts held by the households, about 98.5% consists of savings deposits (Table 13). Only 1.5% of deposit balances were maintained in longer-term time deposit accounts. Most households still prefer to hold short-term financial instruments. The overall average savings balance was posted at PHP 1,754 while the average time deposit balance was PHP 22,000.

Deposit pattern by major occupation of household head and income source. Diverse patterns of savings among depositors by occupational type emerged (Table 14), with grant/pension earners reporting the largest financialized savings of about PHP 10,000. This reflects the fact that most of the respondents receive remittances from abroad, the bulk of which are channeled through the banking system. Households engaged in professions reported an average savings of PHP 4,676. Farmers had an average savings of PHP 2,477, fishermen averaged PHP 1,731, and households whose occupations were lumped under "others" averaged PHP 2,431.

Unexpectedly, livestock and poultry raisers, with the majority as actually sizable operators, reported only an average of PHP 923 in financialized deposits. Most of their excess funds could have been re-invested or rolled over in their business undertakings rather than kept in savings institutions, particularly if their livestock and poultry inventories are very liquid. Next to wage earners who have an average savings of PHP 669, farm laborers have the lowest average financialized deposits of less than PHP 400.

When households were classified according to their predominant income source, those whose major income sources were derived from agricultural undertakings reported higher average financialized savings (Table 15). In Iloilo and Negros Oriental, the discrepancy was large. Agricultural households in Negros Oriental reported the highest average deposits among all the areas at PHP 6,515. The lowest average deposits were reported by non-agricultural households in Misamis Oriental at PHP 162.

Deposit pattern by income group. It is expected that the higher the income of households, the higher the level of financialized savings. However, this pattern was not found in the study (Table 16). For instance, the highest average savings was reported by households with incomes ranging from PHP 60,000 to PHP 70,000 while the lower average incomes were posted by households with incomes of more than PHP70,000.

Form of savings held by rural households. On the average, the values of depositors' assets were relatively higher than those of non-depositors (Table 17). The average total assets of depositors were posted at PHP 192,559 while non-depositors registered an average of PHP 77,790. The discrepancy between the average values of long-term assets and current assets of depositors is also large which was about five times higher. Meanwhile, average current assets were estimated at PHP 20,878 for depositors and PHP 5,697 for non-depositors. Long-term assets consisting of house/lot, farmland, and other structures makeup 48% of the household's total assets. Intermediate assets composed of livestock/poultry inventory, farm equipment, time deposit balances, consumer durables, and bonds/stock and insurance holdings shared 40%.

Asset structure by income group. With increased income, the asset composition of households could shift to longer term financial and physical assets. For depositors, this trend was not consistent. Current assets of depositors comprised only about 11% of the total assets for all income levels. However, households in two income brackets exhibited an interesting pattern. The share of current assets of depositors belonging to the PHP 10,000 and the PHP 50,001-PHP 60,000 income levels was 30% and 24%, respectively (Table 18). Their share of intermediate assets was 15% and 21%, respectively. This shows that these households prefer to keep a larger share of their assets in more liquid form relative to the rest of the households. Among non-depositors, the bulk of their assets was placed on long-term assets followed by intermediate assets across all income levels (Table 19).

Threshold level of income for savings to occur. The distribution of sample households is skewed to the lower income brackets. Rural households with incomes of PHP 10,000 and below are dissaving (Table 20). They make up more than 50% of the total households. Positive mean savings occurred for households with incomes of more than PHP 10,000. The overall average propensity to save was posted at 11%. The mean savings of households generally increases in direct proportion with income.

Regression results

In this section, the analysis of the empirical results is presented. In the linear savings model where savings was defined as a residual, the total population of 974 was used. For the deposit functions, the depositor sample of 157 was used for the OLS

regression model and the total sample of 974 for the logit model. This reflects the assumption that the households' decision to save is a two-stage process. The first stage involves the decision to deposit and the second stage focuses on the level of deposits maintained by the households. To test the relative influence of income, alternative definitions of income (e.g. current vs. permanent) were regressed to determine its relative performance in explaining household savings and deposit behavior.

Determinants of savings behavior

Savings propensities, by major occupation of household head. Regression estimates obtained from a linear savings function for the 974 households categorized by major occupation of household head show that their MPS out of current income ranged from 16% to 60% (Table 21). There were variations in the propensities to save by occupational category. The highest savings propensity of 60% was reported by fishermen. This is an interesting result since small fishermen are generally perceived to be unable to save. Farmers registered an MPS of 39% while farm laborers posted an MPS of 43%. Note also that the MPS of households categorized under "others" was one of the highest obtained in the savings function. The majority of the sample in this category derived income mostly from gambling commissions and rental earnings. Households whose incomes were sourced from the practice of professions and grants/pensions were also included in this category for purposes of the regression estimates.

The MPS out of agricultural and non-agricultural incomes were not very different at 39% and 40%, respectively. This deviates from the findings of previous studies which indicate larger MPS out of agricultural income. This may be explained

by: one, the survey captured households in rural areas which did not concentrate on agricultural or farming alone; and two, non-agricultural sources of income are becoming increasingly important among rural households in the Philippines.

Meanwhile, regression estimates for employed and self-employed households were also positive, with employed households posting a larger MPS (45%) compared to self-employed households (34%). Again, this digresses from the results obtained in previous studies which show that the latter have better savings performance. This implies either of two things: (a) the regularity and fixity of income of employed persons could have encouraged them to set aside an amount for savings; and (b) for self-employed households, the preference to invest in their trade/businesses rather than save could be stronger given that deposit rates are close to negative in real terms. During the survey, a number of households who were mostly businessmen and entrepreneurs affirmed this finding. Majority preferred using their money to augment their working capital rather than invest in depository institutions.

Savings propensities, by income levels. Results of the regression by income group were not very clear (Table 22). The coefficients of determination (R^2) were low, although this is expected from studies using cross-sectional data. Only two income brackets have significant savings propensity coefficients. At zero income, households belonging to the lowest income bracket were dissaving but a one-unit increase in income results in a 67% increase in their surplus funds. The results also imply that while the desire to save is relatively high, the low levels of income prevent households from maintaining surplus funds. On the other hand, while the savings propensities of households belonging to the relatively high-income group had the expected signs, the coefficients were

statistically insignificant. A plausible explanation could be that as income increases, households either maintain other forms of savings (e.g. physical assets or simply invest in education) or roll over their surplus funds in their business undertakings. A number of model specifications were also tested using various definitions of income to determine which one best explains the households' savings performance.

Savings and current income. For the pure income model, current income (Y) was found to be positively related to savings (Table 23). For every peso increase in income, the households keep PHP 0.38 in surplus funds or savings. When INCTYPE (a dummy variable which takes the value of 1 if the predominant income source of the household is from agriculture and 0 if income is sourced from non-agricultural undertakings) was regressed together with Y, both coefficients had the expected signs and were statistically significant. At the same income level, households whose predominant income source were from agricultural activities save more than non-agricultural households.

Regression estimates using dummy variables based on the occupational categories of the household head [with wage earners (OCCUP5) as the reference point] indicate that four categories have significant coefficients: OCCUP1 (farmers), OCCUP2 (fishermen), OCCUP4 (farm laborers), and OCCUP7 ("others"). This means that at the same income levels, these groups save more than the rest of the occupational categories. This result is unexpected, particularly for the fishermen and farm laborers who are generally perceived to be unable to maintain surplus funds. The empirical evidence, however, shows otherwise. An implication that may be deduced is that in the case of farm laborers, the relatively small amount of income and the regularity in which this income

is received oblige them to maintain a certain portion as savings in anticipation of future consumption and unforeseen expenditures. On the other hand, the sample fishermen included in the survey were capture fishermen engaged in big fishing operations such as trawl fishing.

Other relevant factors that could influence savings decisions were included such as interest rates (INT), dependency ratio (DEPR), and educational attainment (EDUC) to determine how other non-income-related factors affect household savings behavior. Only the variables DEPR and EDUC turned out to have significant coefficients. The latter, however, has the wrong sign for both models (Table 24). The negative influence of EDUC implies that the more educated the households, the lower is the level of savings. Two factors can explain this: that the net income effect is negative which does not encourage households to save but allot this to current consumption (e.g. for educational expenses) or that more educated households are probably more aware of the "money illusion" effect and prefer to invest in other alternative financial assets or business undertakings.

As in the pure income models, significant coefficients were obtained for the INCTYPE variable and four of the occupational dummies.

Savings and permanent / transitory income. Regressing permanent (Y_P) and transitory (Y_T) incomes simultaneously on savings, MPS values of 5% and 51%, respectively, were obtained (Table 25). When the INCTYPE variable was included, MPS estimates out of Y_P and Y_T were statistically significant. The coefficient of the latter is greater which means that households save more out of transitory income. The significance of transitory income was also greater than

permanent income which indicates that the former is a better estimate of savings levels. This can also be explained by the fact that the current income measure captured purely cash income which is reflected in turn in the estimation of the transitory portion of income. Similarly, when the occupational dummies were substituted in lieu of the INCTYPE variable, both Y_P and Y_T coefficients were significant. The occupational dummies which have significant coefficients were OCCUP1 (farmers), OCCUP2 (fishermen), and OCCUP4 (farm laborers). This implies that for these occupational categories, their savings levels are also affected by their permanent and transitory income.

Significant coefficients for Y_P and Y_T were also obtained when other variables such as INT, DEPR, EDUC, and INCTYPE were included. The variables DEPR and INCTYPE dummy also turned out to be significant (Table 26).

Determinants of deposit behavior

Studies have shown that income exerts a positive influence on deposit decisions. Hence, it is expected that increases in income encourage households to increase their level of deposits. Results of the logit regression model confirm this relationship.

For current income, the probability of having deposits was significant for households with current income levels of more than PHP 20,000 (Table 27). A 1% increase in income increases the probability to deposit of households belonging to these income classes from 0.4 to 1.0. For permanent income, the probability to deposit is significant for income levels of up to PHP 70,000. The probability to deposit of the households in these income ranges increases as the level of permanent

income rises. In general, results of the logit regression model show that income is a significant factor in the deposit decisions of the households. Other factors or variables which were found to be significant in household decision to deposit are EDUC and INT.

The OLS regression estimates also confirm the above results. Table 28 summarizes the results of four models of deposit behavior. The alternative deposit models confirm the importance of the income variable in deposit decisions. The pure income models (Models 1 and 2) yielded significant MPS out of Y, Y_P and Y_T. For every peso increase in income, households set aside PHP 0.19 out of Y, PHP 0.36 out of Y_P, and PHP 0.15 out of Y_T. The MPS out of permanent income was also higher. This signifies the relative importance of a more "permanent" income source before households transform their surplus funds into financialized savings.

Households could maintain either surplus (savings) funds or deposit balances in savings institutions. They decide based on the transactions costs involved and the returns attendant to the choice. Households perceive that holding savings in financialized form involves certain costs and maintaining surplus funds, for investment yields more return. Thus, "permanent" income sustained for a longer period of time encourages households to maintain savings in financial form.

Except for income, the addition of demographic variables and bank-related variables to the pure income deposit model as shown in Models 3, 4, 5, and 6 did not yield significant results. These variables were included to test the effects of income variability, household, demographic characteristics, the presence of financial institutions in the area, and the interest rates on deposit decisions.

While the logit regression model indicates that INT affects the households' decision to save, the OLS method indicate that INT was not a significant variable in determining the level of deposits of households. Several implications can be inferred from these results. When deposit decisions are made, households could rely more on income rather than on the expected returns on such investments. In addition, when households are limited by minimal income increases, they may fail to respond to economic incentives.

In general, the results confirm the relatively greater importance of income as an explanatory variable in deposit behavior. This also suggests that financial and non-financial variables such as the interest rate and the presence of banks in the area (which affects transactions costs) did not exert a significant influence on the deposit decisions of the sample households. Note that the variables DIST and NBANKS were also found to be insignificant in household deposit behavior. (For a more detailed analysis of the interest and transactions costs effects, see Magno and Tolentino, 1990). That the households' deposit behavior is dependent more on improvements in income and not on the costs involved in deposit transactions nor the expected returns of such investments nor the presence of depository institutions may be true among the sample households.

Conclusions and policy implications

The regression results presented here validate the existence of the savings capacity and potential among rural households. While savings behavior has been found to be influenced by variables such as dependency ratio and education, income proved to be the most important factor in explaining a household's savings behavior.

Both permanent and transitory incomes were found to be a significant determinant of the households' surplus funds, with households keeping more savings out of the latter type. The determinant of savings in financialized form is, however, another story. While households consider both permanent and transitory incomes in their decision to maintain these balances, it was the former that captured a higher MPS. This result suggests that given a more "stable" income source, a larger proportion of savings is placed in financialized form. It may be that income sustained for a longer period of time encourages households to deposit. Other demographic and bank-related factors such as dependency ratios, educational attainment, average deposit rates, and number of banks in the area exerted little influence on deposit decisions.

Thus, the importance of income in savings and deposit decisions should be taken as the centerpiece in any savings/deposit mobilization strategy in the countryside. Indeed, rural households are potential savers and income exerts a significant influence on their capacity to save. Government efforts should, therefore, focus on policies and programs which strengthen income and also provide alternative income-increasing livelihood opportunities in the rural areas. These employment opportunities should not, however, be limited to

agriculture or farm-related activities since earnings from non-agricultural undertakings make up a significant proportion of the total income of rural households. Nevertheless, increases in non-agricultural income should not hinder improvements in agricultural productivity. Reyes (1987), in her study on the structure of rural household income in Region V (Bicol), noted the increasing importance of non-farm income in the total income of rural households. She stressed though that in the Philippine experience, labor transfers to non-farm activities were accompanied by declining farm productivity. Policymakers should take the cue from this finding and implement policies which would provide alternative employment activities without neglecting increases in agricultural productivity.

Hand in hand with this, massive infrastructure and support services that would move employment opportunities to the rural areas and encourage urban-based businesses to invest and expand in the countryside should also be put in place. This includes good roads, efficient marketing networks, effective communication facilities, irrigation facilities, and power supply.

Moreover, because a large proportion of the total assets of rural households are still in non-financial form, strategies to transform these assets in financialized form should also be worked out. The presence of banks did not turn out to be a significant factor in the deposit models. Nevertheless, banks together with informal institutions could still be tapped as the primary channels and mobilizers of deposits in the rural areas. Any savings strategy that should be adopted by banks to tap the savings potential of rural households must also operate under a favorable economic environment and a strong commitment by bank management to implement such strategy. The importance of informing the community about the services

offered by these institutions should not be overlooked, too. The mere presence of formal financial institutions does not guarantee the transformation of surplus funds into financial form.

Finally, the macroeconomic policy environment in general must also be taken into account. Policies which discourage the transformation of savings into financial form must be reviewed and balanced with other policies. One such policy is the taxation of interest income from financial savings. In their portfolio choice, savers as rational individuals compare real rates of return to alternative assets. Given that deposit rates are close to negative in real terms, such policy makes the holding of financial assets unattractive to households and contributes to the tendency of households to hold savings in non-financial form.

Table 1. Summary of results validating the absolute income hypothesis. [5]

AUTHOR	YEAR	SUMMARY OF FINDINGS
Average Prospensity to Save (APS)		
Kuznets	1962	Long-run international APS rises moderately with income, larger increases being counteracted by internal structural changes
Zohar	1967	Similar finding as Kuznets
Houthakker	1960	International private sector APS out of 1965b disposable income is essentially constant
Blyth	1969	Decreasing APS in several South Pacific island economies
Leff	1968	Long-run Brazilian APS is constant over the period 1939-60
Marginal Prospensity to Save (MPS)		
Blyth Gupta	1969 May 1970-June 1970	MPS is an increasing function of income at lower levels of development
Houthakker	1965b	International MPS is larger in the short-run than in the long-run
Williamson	1968	MPS appears to be lower for Asian developing countries than for advanced nations
Yang	1964	MPS of less than unity holds true in many developing countries
Johnson and Chiu	1968	MPS of 44 country cross section data exhibits considerable variation which indicates that a saving function does not exist Results suggest that household saving and private saving are proportional to household income and private income, respectively
Godfrey and Howrey	1968	Finding support Johnson and Chiu. Using international time series data, they find that own - country relationship between income and consumption is strong for some countries but weak for others.

5 Based on Snyder (1974)

Table 2. Marginal propensities to save of selected studies (current income as independent variable)

AUTHOR/YEAR	MPS	SAMPLE/SETTING	
A. BY INCOME SOURCE			
Kely and Williamson (1968)	.10		
Farmer	.11		
Trader and craftsman	.43		
Owner of business	.31		
Government employees	.05		
Other wage earner	.11		
All	.19	Indonesia	1958-1959
Ramanathan (1969)			
Working for self	.17		
Working for Government	.09		
Working for private employer	.02	India	1961;1964
Taylor (1971)			
Labor Income	.45		
Property income	.28		
Transfer income	.89	USA	1953-1969
Ong, Adams and Singh (1976)			
Farm size (ha.)	.35 - .69		
0.0-0.7	.15 - .60		
0.7+	.39 - .70	Taiwan	1960-1970
Bhalla (1978)			
Land categories			
<5 acres	.25	India	1968;1969;
5-15 acres	.35		1969-1970;
>15 acres	.43		1970-1971
Singh, Gupta and Singh (1978)	.40 - .71		
Farm Size (ha.)			
Below 3.5	.29 - .66		
3.5-6.5	.60 - .87		
6.5-10.5	.75 - .95		
10.5-15.5	.81 - .95		1966-1967 to
15.5 and above	.59 - .71	India	1969-1970
Ahn, Adams and Ro (1979)			
Farm Size (ha.)			
0.0 - 0.5	.02 - .65		
0.5 - 0.7	.22 - .42		
0.7 - 0.9	.31 - .40		
0.9 +	.38 - .45	Korea	1965-1970

AUTHOR/YEAR	MPS	SAMPLE/SETTING	
TBAC-UPBRF (1981)			
Agricultural income	.30 - .42		1976-1977;
Non-Agri'l income	.11 - .13	Philippines	1978-1979
Aktar (1987)			
Labor income	.12 - .39		
Capital-labor income	.23		
Capital income	.21		
Transfer income	.30		
Remittance income	.32	Pakistan	1979
Rodriguez (1988)			
Laborers	.82		
Farmers	.66		
Fishermen	.78		
Craftsmen	.64		
Office workers	.76		
Entrepreneurs	.72		
Professionals	.89		
Others	.84		
ALL	.73	Philippines	1986
B. URBAN-RURAL HOUSEHOLD CATEGORY			
Gupta (1970)			
Urban	.39		1950-51 to
Rural	.03	India	1962-63
Joshi (1970)			
Urban	.12	India	1950-51 to
Rural	.01		1962-63
Chauhan, Mundle & Jadhav (1972)			
IAD Participant	.34		
Non-IAD Participant	.42	India	1970-71
Pandey, Nath & Singh (1972)			
Progressive Area	.130 - .675		
Less Progressive Area	.091 - .609	India	1970-71
Nandal (1972)	.34	India	1967-68 to 1969-70
Singh, Gupta and Singh (1978)	.40 - .71	India	1966-67 to 1969-70

Table 3. Summary of results validating Friedman's Permanent Income Hypothesis. [6]

AUTHOR	YEAR	FINDINGS
Friend and Taubman	1966	Regressing the level of savings, results indicate that MPS out of transitory income varies widely with different definitions of permanent income; but less than unity. However, it is generally higher than the MPS out of permanent income examining the changes in saving, results suggests that MPS out of permanent income is larger than MPS out of transitory income
Williamson	1968	Findings are in broad agreement with Friend and Taubman
Gupta	1972	Same as above but results are somewhat anoma lous due to the use of inappropriate data in India
Gupta	April - June 1970 December 1970	Using a moving average and time trend proxies higher MPS were obtained when current income was replaced with permanent income with the latter providing a better fit in urban areas than in rural areas
Choudhury	1968	Results conflict with Gupta's findings; study shows that permanent income has significant effect on rural consumption but a negligible effect on urban consumption
Johnson and Chiu	1968	Using trend income as a proxy for permanent income, results reduced the difference between actual and predicted saving for 10 out of 40 countries examined
Singh and Drost	1971	Using a non-linear iterative least squares procedure, results lend support to PIH and provided less erratic estimates between consumption and permanent income
Ramanathan	1968	Results explain savings behavior among Delhi households equally well. Education was found to be the best classificatory variable MPS out of permanent income is found to vary among occupational and socio-economic groups. MPS out of transitory income is positive and significant but below unity
Betancourt	1971	Using cell means technique among Chilean households and comparing total, within-group functions, the PIH is strongly supported

[6] Based on Snyder (1974)

Table 4. Marginal propensities to save of selected studies (permanent and transitory income as independent variable)

Author/Year	MPS (P)	MPS(T)	Sample/Setting
Friend and Taubman (1966)	.065	.41	22 countries
Friend (1966)	.25		Argentina
Williamson (1986)	.20 - .29	.37 - 1.12	6 Asian Countries
Gupta (1970b)			
Urban	.47	.001	
Rural	.02	.038	India
Bhalla (1980)			
Subsistence	.11	.20 - .21	
Non-subsistence	.36 - .38	.33 - .36	India
Hyun, Adams and Hushak(1979)	.57 - .94	.008 - .39	South Korea
Bhalla (1980)	.22 - .24	.27 - .34	India
Rodriguez (1988)	.60 - .63	.75 - .76	Philippines

Table 5. Summary results of studies which estimated a financial saving function.

Author	Year Published	Period Covered	Type of Data	Definiton of Saving Rate	Independent Variables
Van Atta	1971	1947-1957	Time series-annual	Total Savings Deposits (savings + time + postal deposits)	1. National Income (S) 2. Nominal rate of Interest on savings deposit (S)
Burkner	1980	1965, 1973 1975, 1977	Cross-section of commercial banks	Total Deposits (all deposits)	1. Number of offices of each bank (S)
Sicat	1984	1970-1981	Time series- annual (regional)	Real financial saving (savings + time deposits)	1. Real regional gross national product (S) 2. Weighted real 0 interest rate (S/NS) 3. Regional density of banking institution (NS)
Tan	1984	1970-1982	Time series- semestral	1. M2/GNP	1. Semstral real gross national products (NS) 2. Real rate of Interest one-year time deposits (NS) 3. Number of offices of financial Institutions (NS)
				2. Time-Savings deposits/GNP	- same variables and findings as above
ADB	1985	1961 - 1983	Pooled time series-annual (Countries: Bangladesh, Burma, China, Hongkong, India, Indonesia, South Korea, Malaysia, Nepal, Pakistan, Philippines, Singapore, Sri-Lanka)	Rate of change in per capita real money holdings (M3)	1. Rate of change in per capita real permanent Income (S) 2. Real Rate of Interest on one-year time deposits (S)

Note: S= statistically significant NS=not statistically significant

Source: Lamberte and Lim (1987)

Table 6. Distribution of households and depositors, by area

Area	Number of Households Reporting	% Share	Number of Depositors	% to Total Households	% Share
ALL AREAS	974	100.0	157	16.1	100.0
	---	-----	---	-----	-----
Pangasinan	124	12.7	24	19.4	15.3
Batangas	267	27.4	57	21.3	36.3
Camarines Sur	149	15.3	11	7.4	7
Iloilo	198	20.3	35	17.7	22.3
Negros Oriental	134	13.8	14	10.4	8.9
Misamis Oriental	102	10.5	16	15.7	10.2

a/ Excludes 22 household respondents who reported that they financialized deposits but whose outstanding deposit balances are missing, zero or negligible during the time of survey.

Table 7. Distribution of households and depositors, by demographic characteristics

Demographic Characteristic	Number of Households Reporting	% Share	Number of Depositors	% to Total Households	% Share
SEX	974	100.0	157	16.1	100.0
Male	862	88.5	132	15.3	84.1
Female	112	11.5	25	22.3	15.9
AGE OF HOUSEHOLD HEAD					
< 20	4	.04	-	-	-
21-30	126	12.9	16	12.7	10.2
31-40	194	19.9	28	14.4	17.8
41-50	274	28.1	44	16.1	28.0
51-60	210	21.6	37	17.6	23.6
61-70	122	12.5	22	18.0	14.0
71 and above	44	4.5	10	22.7	6.4
HOUSEHOLD SIZE					
Below 3 members	154	15.8	26	16.9	16.6
4-6	434	44.6	57	13.1	36.3
7-9	298	30.6	60	20.1	38.2
10-12	75	7.7	10	13.3	6.4
Over 12 members	13	1.3	4	30.8	2.5
NUMBER OF HOUSEHOLD DEPENDENTS					
Below 3 members	362	37.2	51	14.1	32.5
4-6	430	44.1	73	17.0	46.5
7-9	160	16.4	26	16.3	16.6
10-12	21	2.2	6	28.6	3.8
Over 12 members	1	0.1	1	100.0	0.6
EDUCATIONAL ATTAINMENT					
Unschooled	37	3.8	2	5.4	1.3
Elementary	652	66.9	91	14.0	58.0
High School	203	20.8	38	18.7	24.2
Vocational	18	1.8	3	16.7	1.9
College or Higher	63	6.5	23	36.5	14.6
No Answer	1	0.1	-	-	-

Table 8. Distribution of households and depositors, by major occupation of household head

Type of Occupation	Number of Households Reporting	% Share	Number of Depositors	% to Total Households	% Share
ALL HOUSEHOLDS	974	100.0	157	16.1	100.0
Farmers	430	44.1	59	13.7	37.6
Fishermen	53	5.4	3	5.7	1.9
Livestock/Poultry Raisers	11	1.1	3	27.3	1.9
Farm Laborers	172	17.7	14	8.1	8.9
Wage Earners	168	17.2	44	26.2	28.0
Craft/Businessmen/ Entrepreneurs	71	7.3	16	22.5	10.2
Professionals	1	0.1	1	100.0	0.6
Grant/Pension Earners	11	1.1	5	45.5	3.2
Others a/	57	5.9	12	21.1	7.6

a/ Includes bet-takers, gamblers, jueteng collector, earning from rental of farm equipment and other occupations which were unclassified.

Table 9. Distribution and average income of rural households, by area and by major income source.

Area/ Major Income Source	n and % Distribution	Proportion of Depositors	Average Income (P)		
			ALL	DEPOSITORS	NON-DEPOSITORS
ALL AREAS	n = 974	n = 157			
Agricultural	52.6	11.5	10,662	12,509	10,421
Non-Agricultural	47.4	26.0	18,870	25,778	16,477
Pangasinan					
Agricultural	59.7	13.5	9,802	11,165	9,589
Non-Agricultural	40.3	30.0	17,050	27,642	12,510
Batangas					
Agricultural	29.6	13.9	18,523	23,947	17,646
Non-Agricultural	70.4	30.0	23,546	29,227	21,136
Camarines Sur					
Agricultural	69.8	4.8	7,837	10,921	7,681
Non-Agricultural	30.2	17.8	13,419	23,678	11,201
Iloilo					
Agricultural	58.1	15.6	10,710	8,861	11,053
Non-Agricultural	41.9	27.7	17,766	23,848	15,434
Negros Oriental					
Agricultural	59.7	7.5	8,956	7,324	9,088
Non-Agricultural	40.3	18.5	12,534	14,224	12,150
Misamis Oriental					
Agricultural	58.8	15.0	8,849	11,656	7,883
Non-Agricultural	41.2	19.0	16,278	20,233	15,348

a/ Categorized according to the predominant income source of the households. Classified as "agricultural" if more than 50 per cent of the households' total income is sourced from agricultural activities and "non-agricultural" if more than 50 percent of income came from non-agricultural undertakings.

Table 10. Distribution and average income of rural households, by income group

Income Levels	n and % Distribution	Proportion of Depositors	Average Income (P)		
			ALL	DEPOSITORS	NON-DEPOSITORS
ALL LEVELS		n=974	14.555	21,404	13,013
< 10,000	50.5	11.8	5.269	5,441	5,246
10,001 - 20,000	27.7	18.9	14.065	14,652	13,929
20,001 - 30,000	10.3	22.0	24.091	24,013	24,127
30,001 - 40,000	4.5	29.5	34.920	36,534	34,254
40,001 - 50,000	2.8	29.6	44.092	44,374	43,973
50,001 - 60,000	1.7	23.5	54.212	55,270	53,886
60,001 - 70,000	1.3	46.2	64.039	64,102	63,986
> 70,000	1.1	63.6	81.485	80,653	81,485

Table 11. Proportion of households with bank and non-bank deposits, by area

Area	Number of Depositors a/	% Share	% to Total Depositors	Number of Bank Deposi-tors Only	% Share	% to Total Depositors	Number of Non-Bank Depositors only	% Share	% to Total Depositors	Number With Bank & Non-Bank Depositors	% Share	% to Total Households
ALL AREAS	157	100.0	16.2	124	100.0	79.0	21	100.0	13.4	12	100.0	7.6
Pangasinan	24	15.3	20.2	23	18.5	95.8	1	4.8	4.2	-	-	-
Batangas	57	36.3	21.3	45	36.3	78.9	8	38.1	14.0	4	33.3	7.0
Camarines Sur	11	7.0	7.4	9	7.3	81.8	2	9.5	18.2	-	-	-
Iloilo	35	22.3	17.7	30	24.2	85.7	1	4.8	2.9	4	33.3	11.4
Negros Oriental	14	8.9	10.4	10	8.1	71.4	4	19.0	28.6	-	-	-
Misamis Oriental	16	10.2	15.7	7	5.6	43.8	5	23.8	31.3	4	33.3	25.0

a/ A total of 22 household respondents who have financialized deposits but whose outstanding deposts balances are missing, zero or negligible during the time of survey are excluded.
Across areas, these households are distributed as follows: Pangasinan (1); Batangas (10); Camarines Sur (2); Iloilo (6); Negros Oriental (2); and Misamis Oriental (1).

Table 12. Average financialized savings of rural households

Area	Average Amount (P)			Proportion in	
	Both	Bank	Non-Bank	Bank	Non-Bank
ALL AREAS	1,865	2,061	631	92.9	7.1
Pangasinan	2,206	2,244	1,.312	97.5	2.5
Batangas	2,529	2,935	519	95.7	4.3
Camarines Sur	1,321	1,328	1,285	82.2	17.8
Iloilo	1,188	1,114	1,185	85.8	14.2
Negros Oriental	2,468	3,387	170	98.0	2.0
Misamis Oriental	318	90	455	19.6	80.4

Table 13. Distribution and average bank deposit balance held by rural households, by area

Area	SAVINGS		TIME	
	No. of Accounts	% to Total	No. of Accounts	% to Total
ALL AREAS	130	98.5	2	1.5
Pangasinan	23	100.0	-	-
Batangas	46	97.9	1	2.1
Camarines Sur	9	100.0	-	-
Iloilo	31	96.9	1	3.1
Negros Oriental	10	100.0	-	-
Misamis Oriental	11	100.0	-	-

Table 14. Average financialized savings of depositors, by major occupation of household head

Type of Occupation	Amount (P)
ALL HOUSEHOLDS	1,865
Farmers	2,477
Fishermen	1,731
Livestock/Poultry Raisers	923
Farm Laborers	384
Wage Earners	669
Craft/Businessmen/Entrepreneurs	1,267
Professionals	4,676
Grant Pension Earners	9,967
Other [a/]	2431

a/ Includes bet takers, gamblers, jueteng collector, earnings from rental of farm equipment and other occupations which were unclassified

Table 15. Average financialized savings of depositors, by area and major income source

Area/ Major Income Source	n	Amount(P)
ALL AREAS		
Agriculture	54	1,942
Non-Agriculture	103	1,825
Pangasinan		
Agriculture	10	1,675
Non-Agriculture	14	2,548
Batangas		
Agriculture	10	2,265
Non-Agriculture	47	2.585
Camarines Sur		
Agriculture	4	1,268
Non-Agriculture	7	1,351
Iloilo		
Agriculture	16	1,493
Non-Agriculture	19	932
Negros Oriental		
Agriculture	5	6,515
Non-Agriculture	9	219
Misamis Oriental		
Agriculture	9	440
Non-Agriculture	7	162

a/ Categorized according to the predominant income source of the households. Classified as agriculrtural activities and non-agriculture if more than 50 per cent of the households' total income is sourced from agriculrtural activities and non-agriculture if more than 50 per cent of income came from non-agricultural undertakings.

Table 16. Average financialized savings of depositors, by income group.

Income Levels	n	Average Amount (P)
ALL LEVELS	157	1,865
< 10,000	52	2,217
10,001 - 20,000	44	2,126
20,001 - 30,000	20	727
30,001 - 40,000	11	1,965
40,001 - 50,000	7	1,667
50,001 - 60,000	4	888
60,001 - 70,000	5	4,092
> 70,000	6	1,061

Table 17. Structure and average assets of depositor and non-depositor households

Asset Composition	ALL		DEPOSITORS		NON-DEPOSITOR	
	Amount	% Share	Amount	% Share	Amount	% Share
TOTAL ASSETS	124,223	100.0	192.559	100.0	77.79	100.0
Current Assets	15304	12.3	20.878	10.8	5.697	7.3
Cash	3.352	2.7	8.574	4.5	2.191	2.8
Bank Deposits(Savings)	1.754	1.4	1.754	0.9	-	-
Non-Bank Deposits	5.928	4.8	6.072	3.2	-	-
Crop Inventory	2.000	1.6	1.201	0.6	2.104	2.7
Account Receivables	2.270	1.8	3.277	1.7	1.401	1.8
Intermediate Assets	49.223	39.6	67.010	34.8	21.883	28.1
Livestock/Poultry Inventory	2.956	2.4	3.983	2.1	8.693	3.5
Farm Equipment	5.429	4.4	11.34	5.9	4.269	5.5
Time Deposits	22	17.7	22	11.4		
Consumer Durables	15.962	12.8	26.882	14	11.974	15.4
Bonds/Stocks/Insurance	2.876	2.3	2.805	1.5	2.947	3.8
Long-Term Assets	59.669	48.1	104.671	54.4	50.21	64.5
Land	59.669	45.6	93.192	48.4	49.084	63.1
Resendential House & Lot	(22.478)	18.1	(40.897)	21.2	(18.482)	23.8
Farm Lot	(34.190)	27.6	(52.295)	27.2	(30.602)	39.3
Farm/Fish Structures	3.027	2.4	11.478	6	1.126	1.4

Table 18. Distribution of assets of depositors (in percent)

Asset Type	ALL LEVELS	< P10,000	P10,001 - 20,000	P20,001 - 30,000	P30,001 - 40,000	P40,001 - 50,000	P50,001 - 60,000	P60,001 - 70,000
TOTAL ASSETS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Current Asset	10.8	30.0	8.5	15.4	1.5	5.2	23.9	3.0
Cash	4.5	18.1	2.3	2.9	0.5	3.5	19.4	0.7
Bank Deposits(Savings)	0.9	2.5	0.9	0.4	0.5	0.5	1.5	1.8
Non-Bank Deposits	3.2	7.0	3.0	4.2	0.4	0.4	2.9	0.0
Crop Inventory	0.6	0.5	1.8	1.2	0.0	0.0	0.0	0.0
Account Receivables	1.7	1.9	0.6	6.7	0.1	0.8	0.0	0.5
Intermediate Assets	34.8	15.4	69.7	14.6	37.0	20.2	20.7	12.7
Livestock/Poultry Inventory	2.1	1.4	3.6	5.1	0.0	0.6	0.0	2.5
Farm Equipment	5.9	0.6	1.8	2.0	31.3	11.8	0.0	0.5
Time Deposits	11.4	3.8	25.2	0.0	0.0	0.0	0.0	0.0
Consumer Durables	14.0	3.1	7.1	6.5	5.5	6.9	20.7	8.5
Bond/Stocks/Insurance	1.5	6.4	1.9	1.0	0.3	0.9	0.0	1.3
Long-Term Assets	54.4	54.7	51.8	70.0	61.5	74.6	55.4	84.3
Land	48.4	53.8	51.5	68.6	27.8	71.7	55.4	84.3
Resedential House & Lot	21.2	18.6	24.4	22.1	22.6	29.4	55.4	71.7
Farm Lot	27.2	35.1	27.1	46.5	5.2	42.3	0.0	12.6
Farm/Fish Structures	6.0	0.9	0.3	1.5	33.7	2.9	0.0	0.0

Table 19. Distribution of assets of non-depositors (in percent)

Asset Type	ALL LEVELS	< P10,000	P10,001 - 20,000	P20,001 - 30,000	P30,001 - 40,000	P40,001 - 50,000	P50,001 - 60,000	P60,001 - 70,000	> 70,000
TOTAL ASSETS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Current Asset	7.3	9.6	6.3	9.8	11.6	4.4	7.7	4.3	2.58
Cash	2.6	3.5	3.3	1.9	7.6	2.3	7.2	2.2	1.13
Crop Inventory	2.7	4.5	3.4	2.6	3.6	0.1	0.0	2.1	0.89
Account Receivables	1.8	1.6	1.6	5.3	0.4	2.0	0.5	0.0	0.55
Intermediate Assets	28.1	17.6	18.5	13.6	26.4	17.4	20.7	11.5	8.86
Livestock /Poultry Inventory	3.5	3.7	4.8	3.1	3.4	7.9	11.7	0.6	0.00
Farm Equipment	5.5	2.9	1.8	3.5	9.5	5.5	0.4	0.2	0.03
Consumer Durables	15.4	3.3	6.0	5.7	6	4	8.2	10.1	8.83
Bond/Stocks/ Insurance	3.6	7.8	5.9	1.4	7.4	0.0	0.4	0.7	0.00
Long-Term Assets	64.5	72.8	73.2	76.6	62.0	78.0	71.7	84.2	88.56
Land	63.1	70.9	72.1	76.1	61.0	75.1	89.6	82.9	87.88
Residential House & Lot	23.8	22.3	31.0	20.1	28.5	27.3	41.1	35.9	61.03
Farm Lot	39.3	46.8	41.0	55.4	31.4	44.7	26.5	47.8	26.84
Farm/Fish Structures	1.4	1.8	1.1	0.6	1	3.1	2.1	0.3	0.69

Table 20. Average propensity to save, by income group

Income Levels	n	% Share	Average Prospensity to Save a/
ALL LEVELS	974	100.0	10.9
< 10,000	942	50.5	(30.5)
10,001- 20,000	270	27.7	7.3
20,001 - 30,000	100	10.3	11.9
30,001 - 40,000	44	4.5	31.9
40,001 - 50,000	27	2.8	39.6
50,001 - 60,000	17	1.7	32.6
60,001 - 70,000	13	1.3	22.7
> 70,000	11	1.1	35.6

a/ Defined as the ratio of savings(residual definition) to income.

Table 21. Regression estimates of a linear savings function, by major occupation of household head and by income source

ITEM	n	Estimated Coefficients		t-values	R^2
		a	b		
TYPE OF OCCUPATION					
Farmers	430	-3594	0.39	14.28*	0.32
Fishermen	53	-3703	.60	6.47*	0.45
Livestock/Poultry Raisers	11	990	0.16	1.47*	0.19
Farm Laborers	172	-3464	0.43	12.36*	0.47
Wage Earners	168	-8718	0.50	7.95*	0.28
Craft/Businessmen/Entrepreneurs	71	-3141	0.27	3.80*	0.17
Others b/	69	-5230	0.44	7.75*	0.47
INCOME SOURCE					
Agriculture	512	-3244	0.38	14.73*	0.3
Non-Agriculture462	-5244	0.40	13.91*	0.30	
Employed	397	-5617	0.45	13.94*	0.33
Self-Employed	577	-3015	0.34	14.77*	0.28

** Significant at five per cent level of confidence.*

a/ S=a+bY
where:
S=savings(residual definition)
a=intercept
b=Marginal Prospensity to Save
Y=total current income

*b/ include bet-takers, gamblers, *jueteng* (numbers) collectors, earnings from rental of farm equipment and other occupations which were unclassified. The sample size of households whose sources of income were derived from the practice of professions and from grants/pensions was to small, hence they were lumped under "others".*

Table 22. Regression estimates of a linear savings function, by income group

INCOME GROUP	Estimated Coefficients			t-values	R^2
	n	a	b		
< 10,000	492	-5,151	0.67	6.36*	0.080
10,001- 20,000	270	-378	0.10	0.75	0.002
20,001 - 30,000	100	-21,278	1.00	3.05*	0.090
30,001 - 40,000	44	14,983	(0.11)	(0.19)	0.001
40,001 - 50,000	27	-39,926	1.30	1.49	0.080
50,001 - 60,000	17	57,846	(0.74)	(0.50)	0.020
> 60,000	24	-1,190	0.31	0.62	0.020

a/ S=a+bY
where:
S = savings (residual) *b = Marginal Propensity to Save*
a = intercept *Y = total current income*
**Significant at five per cent level of confidence.*

Table 23. Regression results: households savings behavior (Dependent Variable: Savings as residual, N=974)

VARIABLES	MODEL 1		MODEL 2		MODEL 3	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	-3959.03	(10.11)*	-4353.20	(90.85)*	-7007.71	(9.24)*
Y a/	0.38	20.11*	0.38	20.21*	0.41	20.59*
INCTYPE b/			1215.21	1.91***		
OCCUP1 c/					3253.74	4.10*
OCCUP2					6200.20	4.59*
OCCUP3					-480.30	(0.18)
OCCUP4					3865.25	4.11*
OCCUP6					912.06	0.75
OCCUP7					2496.98	2.04**
R^2	0.29		0.30		0.32	
$\bar{R}^2$	0.29		0.30		0.31	
F-Value	404.35*		204.56*		64.18*	

** Significant at one per cent level of confidence.*
*** Significant at five per cent level of confidence.*
**** Significant at ten per cent level of confidence.*
a/ Current income.
b/ Dummy on predominant income source of household which takes the value:
Agriculture = 1; 0 otherwise
c/ Dummy on major occupation of household head which takes the value:
OCCUP1 (farmers) = 1; 0 otherwise
OCCUP2 (fishermen) = 1; 0 otherwise
OCCUP3 (livestock/poultry raisers) = 1; 0 otherwise
OCCUP4 (farm laborers) = 1; 0 otherwise
OCCUP6 (craft/businessmen/entrepreneurs) = 1; 0 otherwise
OCCUP7 (other) = 1; 0 otherwise

Table 24. Regression results: households savings behavior (Dependent Variable: Savings as residual, N=974)

VARIABLES	MODEL 1		MODEL 2	
	Coefficient	t-value	Coefficient	t-value
Intercept	-779.10	(0.46)	-3301.06	(1.81)
Y [a/]	0.40	20.50*	0.41	20.76*
INT [b/]	-150.44	(0.93)	-67.48	(0.42)
DEPR [c/]	-2141.05	(1.85)**	-2139.48	(1.86)**
EDUC [d/]	-282.44	(3.79)*	-251.56	(3.38)*
INCTYPE [e/]	1591.29	2.75*		
OCCUP1 [f/]			2921.03	3.68*
OCCUP2			5671.71	4.17*
OCCUP3			-1002.15	(0.38)
OCCUP4			3429.68	3.64*
OCCUP6			628.32	0.52
OCCUP7			2070.21	1.69**
R^2	0.31		0.33	
$\bar{R}^2$	0.31		0.32	
F-Value	88.54*		47.00*	

** Significant at one per cent level of confidence.*
***Significant at ten per cent level of confidence.*

a/ Current Income.
b/ Nominal interest rates on savings deposits as reported by the household.
c/ Dependency ratio
d/ Highest educational attainment of household head.
e/ Dummy on predominant income source of household which takes the value:
Agriculture = 1; 0 otherwise
f/ Dummy on major occupation of household head which takes the value:
OCCUP1 (farmers) = 1; 0 otherwise
OCCUP2 (fishermen) = 1; 0 otherwise
OCCUP3 (livestock/poultry raisers) = 1; 0 otherwise
OCCUP4 (farm laborers) = 1; 0 otherwise
OCCUP6 (craft/businessmen/entrepreneurs) = 1; 0 otherwise
OCCUP7 (other) = 1; 0 otherwise

Table 25. Regression results: households savings behavior (Dependent Variable: Savings as residual, N=974)

VARIABLES	MODEL 1		MODEL 2		MODE
	Coefficient	t-value	Coefficient	t-value	Coefficient
Intercept	864.77	1.46	-355.12	(0.50)	-2219.06
Y_P a/	0.05	1.34	0.06	1.81***	0.08
Y_T b/	0.51	23.25*	0.52	23.42**	0.53
INCTYPE c/			1817.19	3.14*	
OCCUP1 d/					3450.78
OCCUP2					4010.43
OCCUP3					-489.72
OCCUP4					3217.28
OCCUP6					1348.70
OCCUP7					1980.42
R^2	0.38		0.38		0.39
$\bar{R}^2$	0.38		0.38		0.39
F-Value	271.22*		185.88*		71.94*

** Significant at one per cent level of confidence.*
*** Significant at five per cent level of confidence.*
**** Significant at ten per cent level of confidence.*

a/ Permanent income.
b/ Transitory income.
c/ Dummy on predominant income source of household which takes the value:
Agriculture = 1; 0 otherwise
d/ Dummy on major occupation of household head which takes the value:
OCCUP1 (farmers) = 1; 0 otherwise
OCCUP2 (fishermen) = 1; 0 otherwise
OCCUP3 (livestock/poultry raisers) = 1; 0 otherwise
OCCUP4 (farm laborers) = 1; 0 otherwise
OCCUP6 (craft/businessmen/entrepreneurs) = 1; 0 otherwise
OCCUP7 (other) = 1; 0 otherwise

Table 26. Regression results: households savings behavior (Dependent variable: Savings as residual, N=974)

VARIABLES	MODEL 1		MODEL 2	
	Coefficient	t-value	Coefficient	t-value
Intercept	4720.8	2.61*	2027.79	1.02
Y_P a/	0.07	1.85**	0.08	2.02**
Y_T b/	0.52	23.54*	0.53	23.49*
INC c/	-102.28	(0.65)	-33.95	(0.21)
DEPR d/	-5035.00	(3.56)*	-4733.71	(3.37)*
EDUC e/	-152.24	(1.11)	-73.80	(0.53)
INCTYPE f/	2002.59	3.42*		
OCCUP1 g/			3317.45	4.03*
OCCUP2			4041.61	2.88*
OCCUP3			-1024.72	(0.38)
OCCUP4			3057.00	3.14*
OCCUP6			1053.42	0.84
OCCUP7			1727.58	1.37
R^2	0.39		0.40	
$\bar{R}^2$	0.39		0.39	
F-Value	96.74*		53.94*	

** Significant at one per cent level of confidence.*
***Significant at ten per cent level of confidence.*

a/ Permanent income.
b/ Transitory income.
c/ Nominal interest rates on savings deposits as reported
d/ Dependency ratio.
e/ Highest educational attainment of household head.
f/ Dummy on predominant income source of household which takes the value:
Agriculture = 1; 0 otherwise
g/ Dummy on major occupation of the housegold head which takes the value:
OCCUP1 (farmers) = 1; 0 otherwise
OCCUP2 (fishermen) = 1; 0 otherwise
OCCUP3 (livestock/poultry raisers) = 1; 0 otherwise
OCCUP4 (farm laborers) = 1; 0 otherwise
OCCUP6 (craft/businessmen/entrepreneurs) = 1; 0 otherwise
OCCUP7 (other) = 1; 0 otherwise

Table 27. Results of logit regression model for household deposit behavior (basic model)

VARIABLES	Current Income		Transitory Income		Permanent Income	
	Coefficient	Chi-square	Coefficient	Chi-square	Coefficient	Chi-square
Intercept	-2.15	8.56*	-0.99	1.93	0.12	0.01
EDUC1 a/	0.45	12.71*	-0.98	15.29*	-0.94	13.68*
EDUC2 a/	0.55	13.82*	-1.31	20.86*	-1.19	16.66*
DEPR b/	0.34	0.50	0.26	0.33	0.24	0.21
NBANKS c/	-0.01	0.13	-0.01	0.88	-0.03	5.29**
INT d/	0.13	4.78*	0.13	4.95**	0.14	6.32-
HHCODE1 e/	0.17	2.28				
HHCODE2	0.46	13.39*				
HHCODE3	0.39	4.79**				
HHCODE4	1.08	11.35*				
YTCODE1 f/			1.85	14.64*		
YTCODE2			1.62	10.74*		
YTCODE3			1.36	5.38**		
YPCODE1 g/					3.36	4.17**
YPCODE2					0.49	0.14
YPCODE3					-0.41	0.09
Log Likelihood Ratio	578.15*		567.53*		475.39*	

**Significant at one per cent level of confidence.*
***Significant at ten per cent level of confidence.*

a/ Dummy variable on number of years of schooling:
EDUC1 = 1 if in high school; 0 otherwise
EDUC2 = 1 if in college; 0 otherwise
b/ Dependency ratio
c/ Number of banks in the sample areas.
d/Nominal interest rates on savings deposits as reported by households.
e/ Dummy variable on household current income:
HHCODE1 = 1 if income is P10,001 - 20,000; 0 otherwise.
HHCODE2 = 1 if income is P20,001 - 40,000; 0 otherwise.
HHCODE3 = 1 if income is P40,001 - 70,000; 0 otherwise.
HHCODE4 = 1 if income is > 70,000; 0 otherwise.
f/ Dummy variable on household transitory income:
YTCODE1 = 1 if income is < or = 0; 0 otherwise.
YTCODE2 = 1 if income is P 1 - 20,000; 0 otherwise.
YTCODE3 = 1 if income is P 20,001 - 40,000; 0 otherwise.
g/ Dummy variable on household permanent income:
YTCODE1 = 1 if income is < or = 0; 0 otherwise.
YTCODE2 = 1 if income is P 1 - 30,000; 0 otherwise.
YTCODE3 = 1 if income is P 30,001 - 60,000; 0 otherwise.

Table 28. Regression results: households deposit behavior
(Dependent Variable: Financialized savings or deposits; N=157)

VARIABLES	MODEL 1		MODEL 2		MODEL 3		MODEL 4		MODEL 5		MODEL 6	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	352.16	0.25	-2577.59	(1.26)	-2967.26	(0.50)	-4422.46	-0.73	-4203.2	-0.67	-922.73	-0.15
Y [a/]	0.19	4.07*			0.20	3.83*			0.30	2.58*		
Y_P [b/]			0.36	3.64*			0.34	2.94*				
Y_T [c/]			0.15	2.94*			0.17	3.00*			0.15	2.65*
INT [d/]					172.85	0.41	188.35	0.44	108.21	0.24	124.25	0.28
DEPR [e/]					357.02	0.07	913.14	0.17	3340.67	0.63	941.81	0.17
EDUC [f/]					432.23	1.26	183.80	0.47	171.15	0.42	727.85	2.05
INCTYPE [g/]					1816.02	0.82	1491.54	0.67	-273.82	(0.12)	1331.93	0.58
DIST [h/]					-35056.00	(0.97)	-33461.00	(0.92)	-33785.00	(0.91)	-37994.00	(1.02)
NBANKS [l/]					320.98	0.68	323.58	0.68	459.59	0.94	402.57	0.82
R^2	0.10		0.12		0.12		0.13		0.08		0.08	
$\bar{R}^2$	0.09		0.11		0.08		0.08		0.03		0.04	
F-Value	16.53*		10.25*		2.97*		2.78*		1.80**		1.85**	

**Significant at one per cent level of confidence.*
***Significant at ten per cent level of confidence.*

a/ Current Income.
b/ Pemanent Income.
c/ Transitory Income.
d/ Nominal Interest rates on savings deposits as reported by the households.
e/ Dependency ratio
f/ Highest educational attainment of household head.
g/ Dummy on predominant income source of household which takes the value:
Agriculture = 1; 0 otherwise
h/ Distance of depository instutuions to household residence.
l/ Number of banks in the sample areas.

Appendix A

Approaches to the measurement of permanent income

a) Use of a "moving average." This is the most common method used in the measurement of the level of permanent income. This method assumes that a household expects its income in a given period to be the same as the income a "similar" household with a head X years older receives today. This assumption permits expected incomes to be calculated to arrive at an estimate of permanent income for each household (Snyder, 1974). Transitory income is then estimated to be the residual of permanent income and current income. The use of this approach, however, necessitates the use of time-series data.

b) "Cell-mean" approach. This cross-sectional technique involves classifying households into groups by some characteristics (for example, occupation) and using the mean current income of each group as an estimate of permanent income for the group. However, one limitation of this technique is that it fails to consider the effect of future receipts on permanent income.

c) Income-estimating function approach. This method which was developed by Bhalla (1978) approximates the level of permanent income based on the "assets" owned by a household which he defined as a modified earnings function. Following Bhalla, Hyun, Adams, and Hushak (1979) adopted the same method but the function was estimated by regressing certain "permanent" household characteristics on the earnings of the households. Permanent income is then approximated through the predicted value of the earnings function. A major advantage of this method is that it can be used for a single year, cross-section data. Nonetheless, a disadvantage is that it does not take into account cyclical changes which cause the total sample to deviate uniformly from expected income. However, Hyun et. al. believe that if the explanatory variables can provide measures of human and physical resources of households, then the resulting estimate will still reflect the relative permanent income status of households.

Appendix B

Detailed sampling procedure

In each of the study areas, a two-stage simple random sampling scheme was used. The latest list of voters by barangay was gathered to facilitate identification of households in the area.

First-Stage Sampling

- A list of barangays and precincts in the municipalities where the selected banks operate was obtained from the Commission on Elections (COMELEC) office.
- Urban barangays, inaccessible barangays, and those which are located in areas where the peace and order condition is critical were excluded from the list.
- From the remaining barangays, a sample was drawn using a table of random numbers.

Second-Stage Sampling

- For each of the barangays drawn from the first-stage sampling, a list of registered voters was obtained from the local COMELEC.
- Registered voters belonging to the same household were identified in the field with the assistance of the Barangay Captain and/or other knowledgeable residents in the sample barangays.
- Sample households were drawn using systematic sampling with a random start. The procedure is as follows:

Let N = total households in the sample barangay

n = number of sample households in the barangay

$k = \frac{n}{N}$ sampling fraction

$\frac{1}{k}$ = sampling interval

All households were numbered consecutively from 1 to N. A number was selected at random using a table of random numbers. This number, denoted as j was included in the sample. The sample n households were selected using the 1/k fraction as interval. Therefore, every $1/k^{th}$ from the j^{th} household was included in the sample.

Appendix C

Classification of income source, by occupation

Major Income Source	Code	Occupation
A. AGRICULTURE		
1. On Farm		
Crop production	043	farmer
Livestock and	078	piggery operator/hog raiser
poultry production	082	poutry operator
Fish production	045	fisherman
2. Off-farm		
a. Hired labor	022	coconut gatherer
	023	coconut tree climber
	041	farm caretaker
	042	farm laborer
	044	firewood gatherer
	046	fishpond laborer
	048	fishpond watcher
	059	hired laborer
	062	logger
	113	tuba gatherer/seller
	005	
	028	
	071	
	072	
b. Rental of farm equipment	120	rental of farm equipment
	127	thresher owner/operator
	128	rice-corn mill operator
B. NON-AGRICULTURE		
1. Income from salary/wage		
a. Industry	004	bake
	014	bill collector
	020	carpenter
	026	construction worker
	036	electrician
	039	factory worker
	056	handicraft operator/worker weaver/mosquito net
	064	mason/instrument man
	076	painter
	079	plumber
	101	wood sewer

Major Income Source	Code	Occupation
b. Service Sector	002	attendants (nurse aide)
	003	baggage boy/girl
	006	bank employee
	007	banker
	008	barangay captain
	009	barangay councilor
	010	barangay tanod
	011	barber
	012	beautician
	015	boat driver/boatman
	016	bouncer
	018	bread vendor
	024	computer operator
	025	(bus) conductor
	027	cook
	029	dancer
	030	delivery boy/girl
	033	domestic helper
	034	dress maker
	035	driver-jeep,bus,taxi
	038	entertainer
	040	family driver
	051	gardener
	052	government employee
	054	grocery boy
	057	helper/housemaid/houseboy
	066	mechanic
	069	municipal councilor
	075	overseas worker
	080	policemen
	081	porter
	084	private employee
	086	private teacher
	088	provincial councilor
	089	public teacher
	091	radio operator
	096	salesgirl/promo boy/girl
	099	secretary
	100	security guard
	103	soldier
	105	steward
	110	train driver

Major Income Source	Code	Occupation
	111	tricycle driver/motor driver
	112	truck driver
	123	seamen
	125	janitor
	126	waiter/waitress
	129	cashier
2. Income from draft/business self-employment/practice of profession		
a. Craft	058	hilot-native midwife
	090	quak doctor
	107	tailor
b. Business/Self-employment	017	boutique operator
	019	businessmen/businesswoman
	021	charcoal maker
	050	gambling operator
	053	grocer
	055	haciendero
	063	market vendor
	065	meat vendor
	067	middleman
	074	transpo operator
	085	private moneylender
	093	restaurant proprietor
	097	salt-maker/trader
	098	sari-sari store operator
	104	sound system operator/owner
	108	theater operator
	109	trader
	114	vaciador
	115	vendor (veg., cigarette, flower)
	117	laundrywoman
	121	tinsmith/blacksmith
c. Practice of Profession	001	architect
	031	dentist
	032	doctor
	037	engineer
	068	midwife
	070	musician
	073	nurse
	087	private tutor
	102	singer

Major Income Source	Code	Occupation
3. Income from grants/pension/ remittances abroad/lottery winnings		
a. Grants/Winnings Bonus/Gifts	083	preacher/missionary/priest
	122	winnings from lottery
	124	bonus/gifts
b. Pension	077	pensionado
	094	retired government employee
	095	retired US Navy
c. Remittances	092	remittance from family members/ relatives
4. Others	013	bet taker
	049	gambler
	061	jueteng collector
	119	others (unclassified)
C. NON-EARNING GROUP	060	housekeeper/housewife
	106	student
	116	pre-schooler
	116	unemployed/out-of-school youth

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CHAPTER 8

Interest rates and savings mobilization: Empirical evidence from the Philippines

Marife T. Magno and V. Bruce J. Tolentino[1]

Introduction

Significance of the study

Recent developments in the Philippine financial sector lend themselves to the revival of the classical view on the importance of interest rate as a determinant of savings. This is evident in the direction of recent financial reforms undertaken which calls for, among others, the removal of ceilings on deposit interest rates. The rationale behind this move is that the deposit rate is regarded as a "reward" for postponing consumption. Therefore, a higher rate means a higher return. This positive relationship between savings and

[1] Respectively, Consultant, Agricultural Credit Policy Council, and Undersecretary, Department of Agriculture. The authors thank Richard L. Meyer, Emmanuel F. Esguerra, and Aniceto C. Orbeta for their valuable comments; Rebec Fernandez, Josefina G. Gutierrez, and Cristina G. Lopez for statistical assistance; and Ermida R. Concepcion for typing the manuscript. Any errors or omissions are the author's responsibility.

interest rates implies that an increase in deposit rates will lead to higher levels of savings. Rates pegged below an equilibrium rate, that is, below the opportunity costs of capital, result in a low and declining savings rate and the inefficient allocation of resources.

Although the experiences of South Korea, Taiwan, and Indonesia support the above contention (Encarnacion, 1986; Burkner, 1980), the impact of interest rate on savings behavior in developing countries is not fully established. In particular, the direction and magnitude of influence on savings remain an issue requiring empirical investigation.

Objectives of the paper

This paper will examine the effect of interest rate on household savings behavior, in particular, how it induces rural households to save in financialized form. Financial savings come in various forms–stocks, bonds, insurance claims, deposits in banks, and cash. Since deposits are the major financial instruments in the country[2], the study especially looks into the effect of interest rates on a household's decision to maintain deposits in financial institutions.

The specific objectives are:

- To examine the type of interest rate that affects a household's decision to save in banks;
- To determine whether a household's response to interest rates differs significantly given certain household attributes (gross income and level of education); and

[2] In the country, the equities and bonds market is not well developed, hence, deposits are the most important among the various financial instruments.

- To examine the effect of transactions costs on a household's decision to deposit and determine whether this effect varies given certain household attributes.

The paper is organized into five parts. The second part provides a review of literature presenting the results of various empirical tests on the relationship between savings and interest rate and the importance of transaction costs on the savings behavior of households. The methodology chapter that follows next describes the analytical foundation of the model and the regression techniques (logit and the ordinary least square or OLS) used for the estimation of the model parameters. The variables used are also briefly described. Part four presents the results of the model estimation and finally, part five summarizes the major findings of the study and presents recommendations.

Review of literature

Savings and interest rates

Studies on savings behavior in the Philippines were comprehensively reviewed by Lamberte and Lim (1987). These are classified into two broad categories, namely savings at the national/aggregate level and savings at the household level.

For this paper, we limit ourselves to studies made in the country and in other developing countries that give emphasis on interest rate as a determinant of savings.

Aggregate savings and interest rates. Empirical tests on the relationship between savings and interest rate were largely concentrated on the aggregate level (savings based on National Income Accounts). The results of these studies show that the responsiveness of savings to interest rates is still unsettled considering the positive, negative, and insignificant responses from the various tests conducted (Table 1).

Williamson (1968), who did the earliest empirical work on the "interest rate elasticity" hypothesis, observed that personal savings is not affected by real interest rate in five of the six Asian countries studied. Similar results were found by Van Atta (1971), Mejia (1979), Gupta (1970), Ocampo (1985), and Tan (1984). A negative relationship between savings and interest rate was also noted by Giovannini (1985) in his study of Korea. On the other hand, cases supporting the positive responsiveness of savings on interest rates are also abundant e.g., Fry (1978), Yusuf and Peters (1984), Giovannini (1985), and ADB (1985).

Despite the contradictory results of the studies, it appears that the relationship between savings and interest rate is affected primarily by two common factors: (a) the size of the income and substitution effects; and (b) the financial repression within the country. With regards to the first factor, Hicks (1946) demonstrated that the influence of interest rates on individual savings can be either zero, negative, or positive depending on whether the household is better off or worse off after a rise in interest rates. This, in turn, depends on whether the household is a saver or dissaver in the later period. Savers (or lenders) are better off with an increase in interest rates since the present value of their current income becomes higher. This, however, has a negative effect on financial savings since an increase in current consumption is expected to occur, that is,

the income effect of an increase in interest rate dominates the substitution effect. For this group, the income and substitution effects move in the opposite direction. On the other hand, the borrowing household is worse off with a rise in interest rates as this reflects a forgone income for them. This reflects a positive effect on financial savings since current consumption is reduced. For this group, the income and substitution effects are both positive. The aggregate effect then of interest rate on savings depends on the weight of savers and borrowers in the market as a whole, and the net income effect for the saving households. A negative effect on financial savings occurs in cases where the net income effect on savers is negative and where the magnitude is greater than the positive substitution effect.

Financial repression, on the other hand, leads to distortions in real returns and, therefore, economic incentives can become ineffective. Ceilings on interest rate, for instance, can result in negative or very low real returns which lead to a negative or zero effect on deposits.

Aside from the theoretical complexities of the effect of interest rate on savings, econometric and data problems exacerbate the difficulty of estimating said relationship in such areas as separating income from substitution effects and quantifying the role of expectations and planning horizons. The data used for estimation and the period of study can also yield different results. For instance, the use of cross-section data, where interest rates are not distinctly variable may not fully capture the effect on savings. Similarly, the use of time-series data when interest rate ceilings are operative can yield insignificant results.

Household savings and interest rates. In line with the test determining the effect of interest rates on aggregate savings, the interest rate-elasticity hypothesis was likewise examined using household data. Comparatively, studies for the latter are fewer and were generally on the households' choice of financial versus non-financial savings. Studies which employed the OLS regression techniques utilized bank deposits data to verify said hypothesis (Table 2). So far, the Van Atta (1971) and the ADB (1985) studies showed a positive and significant effect of interest rates on financial savings. Sicat's (1984) study on regional savings function yielded both significant and insignificant responses, with the latter response dominating. Insignificant results were also noted in Tan (1984) and in the studies conducted by the Technical Board for Agricultural Credit and the University of the Philippines Business Research Foundation (TBAC-UPBRF) using rural households' financial savings function.

As with aggregate savings, the effect of interest rates on financial savings is far from being settled. In particular, financial savings in developing countries is argued to be not responsive to interest rates because of the following: (1) poor households (or small savers) are insensitive to changes in interest rates (Wai, 1972; Ligeti, 1989); (2) rural households are generally more responsive to services and access than to interest rate variations (Von Pischke, 1978); and (3) non-monetary savings traditionally plays a great role and often ensures greater respect than the possession of money (Ligeti, 1989; Tan, 1984).

A negative correlation of interest rate with financial savings was also observed in developing countries, in particular among Asiatic countries. Such finding was attributed primarily to the high interdependence of savings and investment decisions in

the household sector. In developing countries, a large part of savings is used by the saver himself, hence, an increase in deposit rate would increase borrowing costs, thereby discouraging investments and savings in banks (Williamson, 1986; Sicat, 1984). A negative effect also results when individuals become "target savers" (savers who save for future consumption or for specific purposes). These savers tend to reduce their deposits when interest rate increases since the required level of deposits to meet a targeted level of income is lower.

On the other hand, advocates for a positive relationship between interest rates and savings argue on the premise that interest rate is a key instrument in savings mobilization and its main role is to facilitate the shift from non-financial or physical to financial assets (Gupta, 1984; Srinivasan and Meyer, 1986; Akaah, 1987).

Financial savings and transaction costs

There has been no study, so far, which directly tests the effects of depositor transactions costs on deposits. However, indirect estimates of transactions cost effects (e.g. access to banking facilities) noted the importance of transactions costs in deposit mobilization (Burkett and Vogel, 1986; Srinivasan and Meyer, 1986). Bouman (1977) showed that in third world countries, both rural and non-wealthy households save in financial form if transactions costs are low. Vogel and Burkett (1986) further claimed that studies which found little or no relation between interest rates and financial savings may reflect the existence of high transactions costs that make financial savings insensitive to deposit yields.

Methodology

Analytical considerations

Despite the divergence of opinions concerning the responsiveness of aggregate savings and financial savings to interest rates, there is a greater agreement that the demand for financial assets positively responds to increased interest rates (Adams 1978). Gupta (1984) first recognized such relationships. He observed that changes in real rates of interest on deposits significantly affect the composition of savings, generally, in favor of financial assets. He further contended that the unresponsiveness of aggregate savings to interest rates results from the opposing response of the savings components to changes in interest rates. While financial savings responds positively to interest, real savings responds otherwise.

The microeconomic foundations of household savings behavior done by Burkett and Vogel (1986) exemplify the responsiveness of household savings to economic incentives. This model depicts household choice among a bundle of income-generating assets. It is concerned with the factors determining the forms in which the stock of household savings is held on the assumption that households made a choice between consuming and saving. Briefly, the model postulates that a household allocates wealth on the basis of the wealth maximization criterion. Such criterion implies that assets are held on the basis of expected returns, since the rate of interest on deposits reflects yield to financial assets, then interest rates become an important criterion for a household to hold deposits. Further, since financial assets are held as a liquidity source to fund future cash flows, the demand for this asset becomes positively related to yield and negatively related to inflation and transactions costs.

Under a financially repressive regime where the interest rate is below equilibrium, the attractiveness of financial assets is determined primarily by its liquidity. Improved liquidity, which can be reflected in terms of lower transactions cost, is preferred.

In the case of a financially liberalized regime, the yield of financial assets is the crucial determinant. This regime entails the displacement of cash balances by financial assets to fund cash flows (liquidity) and income-generating assets. A greater proportion of wealth is thus likely to be held in financialized form.

In sum, the use of stocks of assets for funding cash flows implies that the yield and liquidity of these assets are crucial determinants of financial asset demand.

Given the above analytical considerations, this paper examines the following hypotheses:

- That the effect of interest rates is manifested in the choice between holding financial assets and non-financial assets;
- That higher yields for financial assets facilitate increased savings mobilization; and
- That the decision to hold financial assets is negatively related to transactions costs and inflation.

The survey data

The household survey conducted under the Rural Savings Mobilization Project of the Agricultural Credit Policy Council, the Philippine Institute for Development Studies, and The Ohio State University provided the data for this study. The survey was conducted from September to November 1987 in 17 municipalities distributed over six regions in the country as follows:

Island	Region	Province	Municipalities
Luzon	I IV V	Pangasinan Batangas Camarines Sur	Sual, Alaminos San Jose, Lipa City, Mataas na Kahoy Goa, San Jose, Tigaon
Visayas	VI VIII	Iloilo Negros Oriental	Sta. Barbara, Dumangas, Barotac Nuevo Zamboangita, Siaton, Valencia
Mindanao	X	Misamis Oriental	Initao, El Salvador, Gitagum

From these municipalities, 1,000 households were randomly selected, of which 26 samples were discarded due to insufficient data, thus resulting in a total sample of 974 households.

The survey was administered through a structured questionnaire which covers information on the household's demographic characteristics, income and expenditures, wealth, deposits and borrowings, lendings, and attitudes/perceptions towards saving and borrowing for calendar year 1986.

Method of analysis

Two regression methods were employed. First is a logit regression model to determine the effect of interest rates on a household's choice to save in financial institutions. Second is an OLS model to determine the effect of interest rates on the volume of household savings in said institutions.

The Logit Regression Model

1. The Basic Model

The relationship between savings and interest rates is assumed generally to be linear of the form:

$$S = B_1 + B_1 r_1 + E_1 \quad (1)$$

Where:

S is savings
r is the interest rate
B is the coefficient of the i^{th} observation (HH)
E is the error term

To test the household decision to save in financial or non-financial form implies that S is a decision variable which is unobservable and takes a value of 1 if the d ith unit chooses financial assets and 0 if it chooses non-financial assets. That is:

1_d if S> 0
S_d = 0, otherwise

Since financial assets can also mean deposits in banks (for reasons cited earlier), then S_1 = 1 also means that the i^{th} household unit is a depositor.

The method of analysis most appropriate for the above test is the logit model. The logit technique explains the probability that the household will choose an alternative. For instance if S_1 = 1 then B_1 represents the effect of interest rate on the probability of a household opening a deposit account.

The savings demand behavior of households, however, is affected by factors other than interest rates. Equation (1) is thus expanded to include other relevant factors that will reflect the household's ability, willingness, and opportunity to deposit, that is,

$$S_d = B_0 + B_1\, ri + B_2\, NBank_s1 + B_3\, INCTYPE_i + B_4\, Y_1 + B_5\, EDUC_i + E_i \quad (2)$$

Where:

Y = level of current household gross income; reflects "ability"
r = interest rate; INCTYPE = source of income; and
EDUC = education; reflect "willingness"; and
NBANKS = number of banks in the municipality; reflects "opportunity"

Equation (2) serves as the basic model to test the effect of interest rates in the savings decision of households. To determine the effect of transactions costs (TC) on deposits, two options of the basic model are considered: (1) treat r and TC as separate variables; and (2) incorporate the TC variable into r. In any case, the discussion focuses only on the effect of interest rates and transactions cost since the other variables are treated separately in a different study. The logit regression analysis makes it possible to treat each variable individually since the test adopts a ceteris paribus assumption.

2. Interaction Models

Some refinements in the basic model will be done to examine how interest rates and transactions costs behave given specific attributes of the household. This is based on the hypothesis that the significance of interest rates and transactions costs may vary with respect to income class and level of education of households. The basic model then becomes:

For interest rates

$$S = B_0 + B_1 \text{ NBANKS} + B_2 \text{ INCTYPE} + B_3 \text{ EDUC} + B_4 Y + B_5 r + B_6 (Yxr) + B_7 (\text{EDUC x } r) \quad (3)$$

For transaction costs

$$S = B_0 + B_1 \text{ NBANKS} + B_2 \text{ INCTYPE} + B_3 \text{ EDUC} + B_4 Y + B_5 r + B_6 TC + B_7 (Y \text{ x } TC) + B_8 (\text{EDUC x } TC) \quad (4)$$

3. The Variables

a. Dependent variable. The dependent variable is a dummy variable which takes the value of 1 for a depositor and 0 for a non-depositor. The classification as depositor or non-depositor is based on the outstanding deposit balances of the sample households in banks. Of the 974 households, only about 16% (157 households) were depositors.

b. Household income. This refers to the total gross income (inclusive of expenses) earned by the households from all sources–agricultural production, off-farm, and non-farm income–during the reference period. For a better fit of the logit model, households were grouped according to categories which are arbitrarily set, taking into account the lowest and highest income and the number of households per income levels. To wit:

Income level 1 - households with income less than or equal to PHP 10,000
Income level 2 - households with income between PHP 10,001 and 20,000
Income level 3 - households with income between PHP 20,001 and 40,000
Income level 4 - households with income between PHP 40,001 and 70,000
Income level 5 - households with income greater than PHP 70,000

Of the total household sample, 492 households belong to the first category, 270 in the second, 144 in the third, 57 in the fourth, and 11 households in the fifth categories. In terms of total number of depositors, the first category has 52 household depositors; 44 in the second, 39 in the third, 16 in the fourth, and six in the fifth category.

As a categorical variable, household income is represented in the model as dummy variables with level 1 as the reference income. That is,

dummy HHCODE1 = 1 for income level 2 and 0 otherwise
HHCODE2 = 1 for income level 3 and 0 otherwise
HHCODE3 = 1 for income level 4 and 0 otherwise
HHCODE4 = 1 for income level 5 and 0 otherwise

c. **Education.** This variable represents the number of years of formal schooling of the household head. The variable was used as a continuous variable in the basic model but was transformed into a categorical variable for the interaction model to capture the effect of interest rates at different levels of education. The data is grouped as follows:

Elementary / Unschooled = with no formal schooling or with 6 years of schooling
High School = with 7–10 years of formal schooling
College = with at least 11 years of formal schooling

There are 695 households in the first category, 216 in the second, and 63 in the third. In terms of the number of depositors, the first category has 94 household depositors, second category has 40, and the third category has 23 depositors.

Like household income, the education variable is represented in the interaction model as a dummy variable with the elementary/unschooled group as the reference level.

dummy ED_1 = 1 if in high school and 0 if otherwise
ED_2 = 1 if in college and 0 if otherwise

d. Income Type. This variable is a dummy variable describing the predominant income source of households. Households whose income is derived mainly (about 50%) from agriculture activities are classified as agricultural households, otherwise, they are considered non-agricultural households.

e. Interest Rates. Different specifications for interest rates are used in the model primarily to determine the type of interest rates that is most relevant in the household savings demand function. These rates are:

- *Nominal interest rate on savings deposits*, which refers to the explicit interest rate on savings deposits as reported by the household. This rate on the average is 8.35% and varies only slightly among household samples.

- *Real interest rate on savings deposits*, which is the nominal interest rate deflated by the consumer price index to eliminate the effects of inflation. The average real interest rate is 4.82% which means that about 4% is due to inflation.

- *Effective nominal interest rates on savings deposits*, which is computed as the difference between the nominal interest rates and the transactions costs in deposits. The effective rate is an average of 6.61% with minimal deviations within the sample.

- *Average interest rate on informal loans*, which is the interest rate in the non-organized markets. Since not all households reported informal loan rates, values were imputed using the average informal loan rate in the respective municipality. Average informal loan rates showed a mean of 138.12% per annum with relatively large standard deviations.

- *Average interest rate on formal loans*, which was used in some studies as a proxy for savings deposits. This is based on the contention that the interest rates on loans of financial institutions are reflective of the cost of funds (assuming that bank resources are generated from deposits). Values were also imputed similar to what was done with the informal market rates. The average rate is 19.48%.

f. Transactions Costs (TC). Transactions costs refer to the costs incurred by households in depositing and withdrawing from banks. It includes both the expense on food and transportation as well as the opportunity cost of time.[3] This variable was transformed as a percentage of total deposits using the following formula:

$$\%\ TC = \frac{\text{transport and food expense + opportunity cost of time}}{\text{total deposit of household}}$$

The average TC is 1.67% with minimal deviations from the mean.

3 The opportunity cost of time is valued based on the average real daily wage rate of agriculture and non-agriculture sectors (DOLE, 1987).

The summary statistics on the different types of interest rates and transactions costs are shown below:

	N	Mean	Std. Dev.	GV (S^d/ Mean) (%)
Nominal interest rate p/a	974	8.349	1.712	20.5
Real interest rate	974	4.819	1.724	35.8
Effective nominal interest rate	974	6.610	2.608	39.4
Average informal loan rates	974	138.129	89.670	64.9
Average formal loan rates	974	19,484	4.316	22.2
Transactions costs	974	1.667	2.018	121.0

The OLS regression model

The savings demand model (Equation 2) is likewise used as the basic OLS regression model. S^d becomes, however, an observable variable S that takes a continuous value reflecting the households' total deposits in bank and non-bank financial institutions for the reference year 1986. Further, the model was regressed only on the sample households with reported deposits in banks and non-bank institutions which totaled to 158 households. This is in contrast to the total sample (974 households) used for the logit model. The rationale behind this is that the OLS model assumes that the household has made the choice to deposit, and, given this, determine household marginal propensity to save in financialized form with respect to changes in interest rate.

Except for the household gross income variable, the values for the other explanatory variables as explained in the logit model remain. The household gross income for the OLS method takes on a continuous value as actually reported by the households.

The summary statistics on household gross income, interest rates, and transaction costs for the 158 household samples are shown here:

	N	Mean	Std. Dev	GV (%)
Household Deposit	158	4561.52	12122.00	265.7
Nominal Interest Rate	158	8.147	2.21	27.1
Real Interest Rate	158	4.624	2.23	48.2
Effective Interest Rate	158	6.487	4.60	70.1
Average Informal Loan Rates	158	133.054	85.68	64.4
Average Formal Loan Rates	158	19.329	4.98	25.8
Transactions Costs	158	1.564	4.254	271.99

Results and discussion

Seven regression models were run on household deposit behavior. The first two are logit models where the effect of different forms of interest rates and transactions costs are examined. The third employed an OLS method to determine the marginal propensity to deposit with respect to interest rate. The last four are logit interaction models of interest rates and transactions costs vis-a-vis household income level and level of education. The results of the models are presented in Tables 3 to 9. A log likelihood ratio test and an F-test were performed on the logit and OLS models, respectively, to test for goodness of fit.

Interest rates and transaction costs

While the effect of interest rate on financial deposits is still unsettled and needs to be determined *a priori*, the expectation

is that a higher interest rate induces a greater desire for households to deposit or to increase their level of deposits.

This positive relationship between interest rates and willingness to save in financial institutions is observed using nominal, real, and effective savings deposit rates (Table 3). However, only the nominal and real savings rates were found significant. This implies that the savings interest rate is an important determinant of rural households' savings decision. A 1% increase in nominal or real rate[4] will increase the probability to deposit by about 13%. The emphasis here on real rates further indicates that inflation is also crucial inasmuch as it affects future returns.

On the other hand, the insignificant impact of the effective interest rate on the deposit decision of the household is surprising. Since the effective rate differs from the real rates in terms of transactions costs, this finding can also be interpreted as the insignificance of transactions costs in a household decision to save in banks. Another run of the model using transactions costs as a separate variable further supports this claim (Table 4). Similarly, indirect measures of transactions costs like the variable NBANKS showed the correct sign but were not significant.

This result is contrary to what is expected, implying that, in general, rural households are more attentive to inflation than to transactions costs. Further, such a situation may have occurred because the transactions costs per peso of deposit as reported by the households is minimal or that households are generally inattentive to the opportunity cost of time.

[4] It is not surprising that the nominal and real rates exert similar influence on households' decision to save in banks since a cross-section data, where inflation is the same across households, was used and, therefore, nominal rates can also be considered as real rates.

In contrast, the average interest rates on informal and formal loans have an insignificant effect on the households' savings decisions. This suggests that interest rates on loans have no significant bearing on return to deposits, hence, they bring no effect on a household's decision to save. This is possibly because the source of loanable funds specifically for the rural populace comes mainly from government funds and least on deposits.

While savings interest rate on deposits is noted to be a major factor in a household's decision to save, it is observed that this rate is not a significant factor in determining the level of the household's deposits (Table 5). There are various possible explanations for this. First, rural households are "target savers" whose deposits are proportionate to the level of income[5] rather than on expected return. Second, the expected increase in income from a higher savings interest rate may be minimal and, therefore, do not effectively induce households to increase their deposits (that is, the net income-effect is negative). Third, rural households are constrained by their income, hence, cannot respond readily to economic incentives. Lastly, the minimal variations in the interest rate data (see the coefficient of variations of the data) contributed to the inability of the model to capture the effect of interest rates. Such minimal variations is possibly a result of the limited number of banks in the area. This possibility points to a situation where the results do not necessarily reflect the possible impact if a time-series savings deposit rate is used.

Transactions costs are also observed to have no significant impact on the households' level of deposits.

[5] As observed from all the model households, income is noted to be highly significant.

Interest rate and transaction costs interactions

The previous section showed the general effect of interest rates and transaction costs on a household's desire to save in financial institutions and on its level of deposits.

This section presents the results of the interaction between interest rates and transactions costs vis-a-vis the level of income and education. The hypothesis is that the savings decision of households varies with respect to income level and educational attainment.

Interest rates and level of income. Income is a positive and highly significant factor affecting household decision to deposit. The basic model shows that the probability of savings in banks increases as the level of income increases. For instance, the desire to save by households at income level 5 is higher by 92% against the lower income group. Further, the level of deposit increases by 18 centavos for every peso increase in household gross income.

When interest rate was allowed to interact with income, the model yielded coefficients which are not statistically significant (Table 6), indicating that the response of households on interest rates is the same across income levels regardless of their income status.

Interest rates and level of education. Like income, education is noted to have a negative and highly significant effect on a household's decision to deposit. The basic model shows that as households spend more years in school, the desire to save in banks decreases by about 13%. This effect is found consistent for all types of interest rates. This can be explained by the fact that the highly educated households have a more-stable

income source and are exposed to more consumption and investment opportunities. They are, therefore, faced with more alternatives to where they can invest their money. Further, the precautionary motive of savings in banks diminishes as a result of the more stable source of income. On the other hand, when interest rates were allowed to interact with education, the interaction coefficient was noted to be negative for the higher educated group (Table 7). This means that the highly educated households are averse to an increase in interest rates. This may be because the highly educated household is more sensitive to liquidity or transaction cost than to yield. Another reason could be the greater awareness of the higher educated household of the "money-illusion" effect of an increase in interest rate. High rates resulting from monetary tightening tend to be inflationary that "tax" holders of money balances. Thus, if the household expects inflation to occur as a result of the increase in interest rates, there is a tendency to prefer investments in tangible assets or on business projects which conceivably result in lower financial savings.

Transactions costs, level of income, and education. Transactions costs lower return from deposits and, therefore, it is expected that high transactions costs serve as a disincentive for a household to save in financial institutions. Results of the earlier regression runs noted that transactions costs are not statistically significant in either the savings decision of households or their level of deposits. The interaction model on transactions costs and income class, however, reveals that transactions costs are a major decision variable for saving (Table 8). For the low income earners, transactions costs are found to have a significantly negative effect on households' decision to deposit, thus, supporting the above hypothesis.

On the other hand, results of interaction between interest rates and the higher income earners (with annual gross income greater than PHP 40,000) as well as education yielded results which are in contrast to what is expected (Table 9). Refinements of the transactions costs variable may be necessary.

Conclusions and policy implications

The results of this study validate the interest rate elasticity hypothesis on the savings behavior of households. In particular, the savings deposit rate is noted to have a positive impact on the desire of households to hold savings in financialized form and, therefore, becomes an important determinant of rural households' deposit behavior. Interest rate, however, is noted to have no significant effect on the level of deposits of households, and thus no definite conclusion was arrived at regarding the marginalized propensities to save. This result should not, however, be taken as an outright rejection of the hypothesis since the interest rate data used showed minimal variations such that employing a time-series data may produce different results.

On the other hand, transactions costs and its indirect measure (e.g., NBANKS) showed no significant impact on both the savings and deposit behavior of households. It can, however, be said that since interest rate has a positive impact on the savings behavior of households, then factors that tend to reduce deposit yield have a negative effect on a household's desire to deposit.

Since transactions costs reduce depositors' net returns, high transactions costs can, therefore, result in a substantial decrease in deposits. Another factor found to have a significant negative

impact on savings is inflation. Inflation offsets increases in the expected returns to deposits such that interest rates yielding negative real returns would have detrimental effects on deposits.

Therefore, policies that increase positive net real returns should be pursued and redirected towards reducing inflation and transactions costs of deposit. Such policies include eliminating ceilings on interest rates, barriers to branching, gross receipt tax (GRT), and loan targeting policies. These policies raise intermediation costs and cause a shortage of loanable funds, thereby curtailing the development of financial intermediation. For instance, ceilings on interest rates that do not reflect the true cost of capital discourage savings because the disutility of future consumption is not well compensated. Barriers to entry by banks, in turn, reduce the accessibility of financial institutions which can contribute to inefficient services. On the other hand, the GRT levied on banks, in addition to their corporate income taxes, creates a double taxation to financial institutions which increases the cost of financial intermediation. Meanwhile, lending to specific clients, as exemplified in Presidential Decree No. 717, does not only work against the clientele it aims to serve but also forces banks to allocate their resources "unoptimally", creating inefficiencies in the financial market. Other superfluous policies include the tax on the interest income on deposits which further reduces the yield on deposit; the high interest rates on Treasury Bills which makes savings and time deposits less competitive, and thus divert funds from financial intermediaries; and lastly, various government "liquidity" programs for financial institutions that make savings mobilization efforts a second priority.

In sum, regressive financial regulations should be eliminated to increase savings, bring down loan interest rates, promote bank expansion, and increase investments.

Table 1. Summary results of empirical tests on interest rate responsiveness of savings

Source	Sample	Method of Estimation	Major Finding
1.Williamson (1968)	Burma, Japan, Philippines, South Korea, Taiwan	Estimating determinants of real personal savings rate per capita using individual and pooled annual time-series data from 1950 to 1964	Real rate of interest was not significant
2.Van Atta (1971)	Burma, Japan, Philippines, South Korea, Taiwan	Estimating determinants of real personal savings using annual time-series data from 1947 to 1967	Real rate of interest on savings deposit was not significant
3.Fry (1978)	Burma, Korea, India, Philippines, Taiwan, Singapore, Malaysia	Estimating a domestic savings function by the two-stage least squares with country dummy variables method (pooled time-series data)	A 10% increase in the real rate of interest would raise the ratio of savings to GNP by 1.4–2.1%
4. Mejia (1979)	Burma, Korea, India, Philippines, Taiwan, Singapore, Malaysia	Estimating determinants of savings ratio using annual time-series data	Nominal and real interest rates were not significant
5. Burkner (1980)	Philippines	Estimating determinants of real personal savings per capita using time-series data from 1950 to 1977 (included the years when usury legislation was not operative and the years when it was)	Nominal and real time deposits were positive and significant
6.Yusuf and Peters (1984)	Korea (1965–82)	Estimating an aggregate savings function by the ordinary least squares method (the generalized least squares method was used to correct for serial correlation)	A 10% increase in the real rate of interest on time deposits would raise gross national savings by 11.57% and gross domestic savings by 5.03%
7. Gupta (1984)	12 Asian LDCs	Estimating an aggregate savings function by the ordinary least squares method	The hypothesis is rejected in all but four cases (Pakistan, the Philippines, Sri Lanka, and Thailand)

Source	Sample	Method of Estimation	Major Finding
8. Gupta (1984)	12 Asian LDCs	Estimating a financial savings function by the ordinary least squares method	All coefficients significantly different from zero have the expected signs but in quantitative terms, interest rates have a significant effect in only four countries (India, Korea, Pakistan, and Thailand); for eight LDCs, real and financial savings are substitutes
9. Ocampo et al. (1985)	Colombia	Estimating an aggregate savings function by the Cochrane-Orcutt method to correct for autocorrelation	The effect of the real rate of interest has a very low statistical significance though it is positive
10. Giovannini (1985)	7 Asian LDCs	Estimating a Keynesian-type savings function identical to the one used by Fry but excluding two observations corresponding to the post-Korean financial reform period	The coefficient of the real rate of interest is still positive but quantitatively less significant
11. Giovannini (1985)	7 Asian LDCs	Estimating the same equation as above over a longer period of time	The coefficient of the real rate of interest is negative but insignificant
12. Giovannini (1985)	18 LDCs	Estimating an equation in which the growth rate of consumption is an increasing (stochastic) function of the expected real rate of interest within the framework of a utility-maximizing behavior for each individual	The coefficient of the real rate of interest is significantly different from zero in the estimates with the instrumental variables method only in the cases of Jamaica, Burma, India, Greece, and Turkey
13. Tan (1985)	Philippines	Estimating determinants of national and personal savings ratio using semestral time-series data from 1970 to 1982	Real rate of interest on a one-year time deposit was not significant
14. ADB (1985)	13 Asian countries	Estimating determinants of GNS ratio using annual pooled time-series data from 1961 to 1983	Real rate of interest on a one-year time deposit was significant
15. Leite and Makonnen (1986)	6 African LDCs (pooled)	Estimating a private savings function by the weighted least squares method using normalized variables to correct for heteroscedasticity	The coefficient of real rates of interest is positive but significantly different from zero only in specifications that exclude the variable change in income

SOURCES OF DATA:
Lamberte MB, Lim J. 1987. Rural Financial Markets: A Review of Literature. PIDS Staff Paper Series No. 87-02.
Mikesell RF, Zinser JE. 1973. The Nature of the Savings Function in Developing Countries: A Survey of the Theoretical and Empirical Literature. Journal of Economic Development, 11(1):1–26.

Table 2. Summary results of studies which estimated a financial saving function

Source	Sample	Period Covered	Type of Data	Definition of Saving Rate	Independent Variables
Van Atta (1971)	14 Asian Countries	1947–67	Time series – annual	Total Savings Deposits (savings + time + postal + deposits)	Nominal rate of interest on savings deposits (S)
Sicat (1984)	Philippines	1970–81	Time series – annual (regional)	Real financial saving (savings + deposit)	Weighted real interest rate (S/NS)
Tan (1984)	Philippines	1970–82	Time series –semestral	Time + Savings deposit / GNP	Real rate of interest on one-year time deposit (NS)
ADB (1985)	14 Asian Countries	1961–83	Pooled time series – annual (Bangladesh, China, Hong Kong, India, Indonesia, South Korea, Malaysia, Nepal, Pakistan, Philippines, Singapore, Sri Lanka)	Rate of change in per capita real money holdings (M3)	Real rate of interest on one-year time deposit (S)
TBAC - UPBRF (1979)	Philippines	1977	Cross-section data on 1,215 farm households		Weighted Average loan rate (NS)
TBAC - UPBRF (1981)	Philippines	1976–78	Cross-section data on 127 respondents over a three-year period		Weighted loan interest rate (NS)

Note: S = Statistically Significant; NS = Not Statistically Significant
SOURCE OF DATA: Lamberte M, Lim J. 1987. Rural Financial Markets: A Review of Literature. Philippine Institute for Development Studies Staff Paper Series No. 87-02.

Table 3. Results of logit regression model on household deposit behavior (basic model). [a/]

Variables	IR-PA [e/]		D-IRPA [f/]		E_RATE [g/]		AVE-INT [h/]		AVE-LINT [i/]	
	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square
Intercept	-0.1228	0.03	0.3348	0.36	0.7978	2.41	0.4451 **	0.69	0.9039	1.96
NBANKS [b/]	0.00164	0.01	0.00033	0.00	0.00305	0.05	-0.0256 *	1.85	0.00278	0.04
HHCODE1 [c/]	0.1426	1.54	0.1413	1.52	0.1465	1.62	0.1598	1.93	0.1471	1.64
HHCODE2	0.4079	10.20 **	0.4083	10.22 ***	0.4157	10.60 ***	0.4146	10.43	0.4155	10.60
HHCODE3	0.3366	3.45 *	0.3370	3.46 *	0.3626	4.06 **	0.3674	4.14	0.3651	4.11
HHCODE4	0.9169	8.15 ***	0.9192	8.19 ***	0.9524	8.79 ***	0.9671	8.99	0.9518	8.78
EDUC	-0.1326	14.18 ***	-0.1322	14.11 ***	-0.1242	12.68 ***	-0.1198	11.61	-0.1249	12.80
INCTYPE [d/]	-0.2739	7.69 ***	-0.2745	7.72 ***	-0.2807	8.07 ***	-0.2876	8.43	-0.2812	8.10
Interest	0.1257	4.48 ***	0.1232	4.40 ***	0.000215	0.00	0.00330	5.33	-0.00542	0.08
Log Likelihood Ratio		441.42 ***		474.42 ***		642.65 ***		425.09 ns		369.84 ns

** Significant at 10 percent Alpha.*
*** Significant at 5 percent Alpha.*
****Significant at 1% Alpha*

a/ Dependent variable CFIN is a dummy variable which takes the value of 1 if depositor and 0 if non-depositor.
b/ Number of banks in the municipality.
c/ Dummy on household annual gross income with:

HHCODE 1 = 1 if income is PHP 10,001– PHP 20,000; 0 if otherwise
HHCODE 2 = 1 if income is PHP 20,001 – PHP 40,000; 0 if otherwise
HHCODE 3 = 1 if income is PHP 40,001 – PHP 70,000; 0 if otherwise
HHCODE 4 = 1 if income is> PHP 70,000; 0 if otherwise
HHCODE 0 = income is < and = PHP 10,000 (base income)

d/ Major source of household income: 1 for agriculture, 0 if otherwise.
e/ Interest rate in savings deposits as reported by households.
f/ Real interest rate on savings deposits as reported by households.
g/ Effective rate of interest = nominal interest - % transaction cost.
h/ Average interest rate on informal loans.
i/ Average interest rates on formal loans.

Table 4. Results of logit regression on household deposit behavior (transactions costs variable).

Variables	Coefficient	Chi-Square
Intercept	-0.1177	0.03
NBANKS	0.00110	0.01
HHCODE1	0.1414	1.51
HHCODE2	0.4082	0.21***
HHCODE3	0.3370	3.46*
HHCODE4	0.9163	8.14***
EDUC	-0.1323	14.09***
INCTYPE	-0.2744	7.71
IRPA	0.1269	4.50***
TRANS1	-0.00058	0.03
Log Likelihood Ratio		637.81***

See footnotes in Table 3.

Table 5. Results of OLS regression model on household financial savings

Variables	IR-PA		D-IRPA		E_RATE		AVE-INT		AVE-LINT	
	Coefficient	T-Value	Coefficient	T-Value	Coefficient	T-Value	Coefficient	T-Value	Coefficient	T-Value
Intercept	-3960.168	-0.889	-3426.155	-1.009	-2350.006	-0.813	-3283.342	-1.042	-3129.545	-0.682
NBANKS	-115.541	-0.826	-118.066	-0.841	-121.776	-0.872	-190.517	-0.911	-111.309	-0.797
HH-GY	0.201	3.895 ***	0.201	3.899 ***	0.197	3.846 ***	0.197	3.83 ***	0.199	3.874 ***
EDUC	447.052	1.311	445.356	1.306	456.764	1.35	464.604	1.371	456.320	1.368
INCTYPE	1732.567	0.788	1739.802	0.791	1743.050	0.796	1629.025	0.743	1636.396	0.743
Interest	168.239	0.6921	185.256	0.439	14.124	0.898	8.661	0.507	29.256	0.156
F-Ratio		3.994 ***		4.002 ***		4.141 ***		4.017 ***		3.964 ***
R-Squared		0.1161		0.1163		0.1199		0.1167		0.1154
n (Sample Size)		158		158		158		158		158

** Significant at 10 percent Alpha.*
***Significant at 5 percent Alpha.*
****Significant at 10 percent Alpha.*

Table 5a. Results of OLS regression model on household financial savings (transactions costs)

Variables	Coefficient	T-Value
Intercept	-2445.609	-0.532
NBANKS	363.993	0.778
CLAS-1	1939.601	0.880
BDEN	-39758.000	-1.100
TRANS-1	-16.828	-1.057
IRPA	219.300	0.514
HH_GY	0.198	3.850***
EDUC	424.159	1.243
F-Ratio	3.149 **	
R-Squared	0.1281	
n (Sample Size)	158	

See footnotes in Table 3.

Table 6. Results of logit regression interaction model for HH deposit behavior (INCOME X INTRATE)

Variables	IR-PA		D-IRPA		E_RATE		AVE-INT		AVE-LINT	
	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square
Intercept	-4.5937	0.75	-3.8209	0.51	-6.4802	1.55	-6.5501	1.56	-6.3927	1.49
NBANKS	-0.00047	0.00	-0.00294	0.04	0.000226	0.00	-0.0275	2.12	0.000276	0.00
HHCODE1	-0.8280	1.90	-0.8222	1.88	0.1157	0.07	0.1036	0.06	0.1061	0.06
HHCODE2	-0.2420	0.13	-0.2343	0.13	0.7059	1.85	0.6450	1.51	0.6959	1.80
HHCODE3	0.4309	0.18	0.4475	0.20	1.3670	2.19	1.3749	2.23	1.3548	2.14
HHCODE4	6.0435	1.38	6.0868	1.41	6.9807	1.88	6.7967	1.76	6.9942	1.88
EDUC	-0.1271	12.99 ***	-0.1266	12.88 ***	-0.1250	12.53 ***	-0.1202	11.42	-0.1254	12.61 ***
INCTYPE	0.2637	7.01 ***	-0.2650	7.08 ***	-0.2867	8.30 ***	-0.2925	8.61	0.2866	8.31 ***
Interest	0.2317	5.02 **	0.2272	4.96 ***	0.000388	0.01	0.00322	5.08	-0.00368	0.03
ICODE 1	-0.2384	2.69	-0.2362	2.66	-0.00600	0.00	-0.0123	0.01	-0.00855	0.01
ICODE 2	-0.1611	1.01	-0.1593	0.99	0.0722	0.34	0.0577	0.21	0.0698	0.32
ICODE 3	0.0235	0.01	0.0276	0.01	0.2538	1.23	0.2543	1.25	0.2503	1.19
ICODE 4	1.3182	0.02	1.3287	1.04	1.5504	1.44	1.4981	1.33	1.5538	1.44
Log Likelihood Ratio		436.45 ***		469.46 ***		638.85 ***		479.39 n.s.		462.86 ***

See footnotes in Table 3.

Table 7. Results of logit regression model for household deposit behavior (EDUC x INTRATE)

Variables	IR-PA		D-IRPA		E_RATE		AVE-INT		AVE-LINT	
	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square	Coefficient	Chi-Square
Intercept	-1.8149	7.57 ***	-1.3848	6.8 ***	-0.8413	3.25 *	-1.1494	5.61 **	-0.9792	2.57
NBANKS	0.00604	0.18	0.0048	0.11	0.00561	0.15	-0.02	1.1	0.00805	0.31
HHCODE1	0.1429	1.52	0.1419	1.5	0.1426	1.50	0.1602	1.9	0.1492	1.65
HHCODE2	0.4022	9.69 ***	0.4024	9.7 ***	0.4137	10.26 ***	0.4089	9.91 ***	0.4117	10.16 ***
HHCODE3	0.3391	3.44 *	0.3387	3.43 *	0.3612	3.93 **	0.3659	4.02 **	0.3597	3.89 **
HHCODE4	0.9731	9.14 ***	0.9747	9.17 ***	1.0033	9.69 ***	1.0186	9.94 ***	1.0081	9.82 ***
INCTYPE	-0.256	6.56 **	-0.2564	6.58 **	-0.2663	7.08 ***	-0.2669	7.1 ***	-0.2617	6.85 ***
Interest	0.1199	4.12 **	0.1192	4.14 **	0.00292	0.97	0.00315	4.84 **	0.0058	0.09
ED-Rate1	-0.0652	6.77 ***	-0.0455	6.88 ***	-0.0489	7.49 ***	-0.0443	6.43 **	-0.047	6.96 **
ED-Rate2	-0.452	0.01	0.00047	0	-0.00213	0.07	0.000323	0	0.00056	0.01
Log Likehood Ratio		389.21 ***		425.71 ***		584.62		359.3 **		332.56 ***

**Significant at 10 percent Alpha.*
*** Significant at 5 percent Alpha.*
****Significant at 1 percent Alpha*

Table 8. Results of logit regression model on household deposit behavior (TRANS x INCOME)

Variables	Coefficient	Chi-Square
Intercept	-1.2442	2.26
NBANKS	0.00408	0.08
HHCODE1	0.0733	0.35
HHCODE2	0.4800	8.99***
HHCODE3	1.0725	9.48***
HHCODE4	1.2958	6.93***
EDUC	-0.1324	13.62***
INCTYPE	-0.2680	7.16***
IR-PA	0.1253	4.30 **
TRCODE1	-0.00554	2.94 *
TRCODE2	0.00773	0.47
TRCODE3	0.1216	4.12 **
TRCODE4	0.0399	1.04
Log Likelihood Ratio		536.47***

See footnotes in Table 3.

Table 9. Results of logit regression model on household deposit behavior (TRANS x EDUC)

Variables	Coefficient	Chi-Square
Intercept	-1.8968	8.11 ***
NBANKS	0.00591	0.17
HHCODE1	0.1401	1.46
HHCODE2	0.4017	9.68 ***
HHCODE3	0.3397	3.46 *
HHCODE4	0.9733	9.15 ***
ED1	0.7841	18 ***
ED2	0.4897	7.84***
INCTYPE	-0.2577	6.66 ***
IR-PA	0.1111	3.52 *
TR-ED1	0.0420	6.24 **
TR-ED2	-0.00076	0.01
Log Likelihood Ratio		390.73***

See footnotes in Table 3.

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CHAPTER 9

Loan programs for the poor feasible: The "Grameen Bank" of Bangladesh shows how

Working Paper No. 87-07
Agricultural Credit Policy Council
(20 November 1987)[1]

V. Bruce J. Tolentino, PhD[2]

Over the past few years, there has been renewed interest in agricultural finance issues. Particular concern has been focused on 'micro-lending' as a means of helping provide the poor with access to livelihood opportunities.

As a successful example of micro-lending to the poor, the Grameen (Rural) Bank of Bangladesh has raised the hope that against the dismal record of waste and the ineffectiveness of most socially-oriented lending, there has been found a useful, practical model.

[1] With Dr. V. Bruce J. Tolentino as Executive Director, Dr. Gilberto M. Llanto as Deputy Executive Director for Policy Research and Analysis, and Orlando S. Abelgas as Deputy Executive Director for Comprehensive Agricultural Loan Fund.

[2] Executive Director, Agricultural Credit Policy Council.

The Grameen Bank process

The Grameen Bank process simultaneously achieves the mobilization of savings, the provision of loans, and the nonformal education of borrowers. The key element of the process is the intensive organizational support and monitoring provided by the Grameen Bank staff. Small groups of five potential participants are formed and put through a 14-session course on personal and community development. They are asked to save an amount up to a quota. Then the group decides, together, who among them gets the first loan. Loans to the other members are contingent on the good repayment and loan performance of the current borrowing members. Meetings, collections, and lending are done on a weekly basis, right in the barrio.

Grameen: The view from Philippine policy

Philippine policymakers have been following developments in the Grameen Bank project for a number of years with great interest, ever since Dr. Muhammad Yunus, the Managing Director of Grameen Bank, won the 1984 Ramon Magsaysay Award in community leadership.

Indeed, the repayment rate of the Grameen Bank's operations is truly 98%. That is a truly enviable record. However, further analysis shows that the factor which makes the remarkably high repayment record possible also makes the Grameen experience difficult to replicate. The reason why the repayment rate is high, even on loans to small uncollateralized borrowers, is that the monitoring of loans under the Grameen system is very intensive.

The system, therefore, duplicates the operation of the usual informal lender – the "5-6" operator.

Note however, that the 98% repayment rate is quoted as repayment on principal only. No figures are mentioned on the repayment rate on interest and on the recovery of loans on schedule. Furthermore, the cost of monitoring is not fully covered by the Grameen Bank's revenues from its loan repayments. International aid agencies such as the Canadian International Development Agency and the International Fund for Agricultural Development subsidize a large proportion of the Grameen's operating and monitoring costs, which is estimated at 20% of loans disbursed.

The Grameen Banks' lessons

But even with the above caveats, the lesson of the Grameen experience is clear: to serve the small farmer, we have to create a financial system which is responsive to the unique characteristics of the farmer's lifestyle and economic cycles. In the Philippines like other Asian countries, we know that 2/3 of all loans that currently go to the agricultural sector are provided by informal lenders. The task of the rural financial policy is to beat the lender at his own game by allowing more flexibility, profitability, and private entrepreneurship in the rural finance business.

As President Aquino herself says, we have to get government out of business and allow the private sector to bloom as it should. Thus, the emphasis of policy, especially in credit, is to encourage the natural capacity of the banking system to adapt and innovate.

No easy, single answer

There are no easy answers to the rural finance problem. Also, there is not one single answer. What needs to be fostered for rural finance are innovative solutions born out of the specific features and characteristics of each locale and situation. Certainly, the Grameen Bank model is useful, but even in Bangladesh, the Grameen Bank serves only a small proportion of the demand for finance. The Grameen Bank operates along with a whole spectrum of government and private commercial banks, each with its on clientele and specialization.

Banks must be allowed to innovate, while borrowers must learn to adjust to bank financing. Indeed, both sides of the financing situation must adjust toward the other. Certainly, bankers want to lend. Lending is a bank's business. Yet, banks need to be good stewards of their depositors' money. On the other hand, borrowers want loans. But the loan must be backed up by a viable project and the entrepreneurship and managerial capacity of the borrower to run the project. Always we must keep reminding ourselves that banks are businesses and not social welfare agencies. We must not confuse loans with subsidies, or worse, charity.

Innovative Philippine responses

Examples of innovative financing in the Philippines already abound, among which are:

a. In Pampanga, the Ugnayang Magsasaka ng San Simon has been financed on a long-term basis by the Land Bank of the Philippines (LBP) and the Planters Development Bank, all at 100% repayment rates;

b. A private development bank under the guarantee cover of the government's Guarantee Fund for Small and Medium Enterprises (GFSME) is now financing farmers via farm machinery dealers in Cagayan Valley;

c. A consortium of rural banks has implemented a credit-in-kind loan collection and production marketing scheme in the Southern Mindanao area;

d. About 2/3 of the current aquaculture industry was developed with loan and guarantee assistance from the Technology and Livelihood Resource Center and the GFSME. Today, banks are lending to aquaculture without the need for guarantees.

e. The Federation of Free Farmers' Cooperative, Inc. is being supported by loans from the National Food Authority, and hopefully later from the LBP for relending to their members.

f. The operations of other successful cooperatives, for example that of Tubao, La Union; of the Visayas Cooperative Development Center in Cebu; of the Mindanao Alliance

of Self-help Societies – Southern Philippines Educational Cooperative Center (MASS SPECC) in Cagayan de Oro; of the National Market Vendors Cooperatives Service Federation, Inc. (NAMVESCO) nationally; of the Cooperative Rural Bank of Davao City; of the Mallig Samahang Nayon Multipurpose Cooperative (MASNAMARCO) in Isabela; and so forth.

Other examples can be pointed out. Each of the examples are unique to their circumstances, and that's what private enterprise is. Incidentally, plurality is also the hallmark of a functioning democracy!

Appendix: List of Acronyms

ACPC	Agricultural Credit Policy Council
ADB	Asian Development Bank
AGFP	Agricultural Guarantee Fund Pool
AGL	Agricultural Loan Fund
AITTP	Agro Industrial Transfer Program
ALF	Agricultural Loan Fund
ALPO	Agrarian Livelihood Program Office
AMCs	Agricultural Marketing Cooperatives
APRACA	Asia-Pacific Rural and Agricultural Credit Association
APS	average propensities to save
ARBs	Agrarian Reform Beneficiaries
ARGF	Agrarian Reform Guarantee Fund
ASEAN	Association of Southeast Asian Nations
ATM	automated teller machine
BACOD	Bureau of Agricultural Cooperatives Development
BAI	Bureau of Animal Industry
BANCOOP	Banco Nacional para las Cooperativas
BAS	Bureau of Agricultural Statistics
BCBS	Basel Committee on Banking Supervision
BCP	business continuity plans
BFAR	Bureau of Aquatic Resources
BIA	Basic Indicator Approach
BIR	Bureau of Internal Revenue
BKK	Balikatan sa Kabuhayan
BKKK	Bagong Kilusang Kabuhayan at Kaunlaran
BLU	branch-lite units
BSFIs	BSP-supervised financial institutions

BSP	Bangko Sentral ng Pilipinas **also known as the Central Bank of the Philippines (CBP)*
CALABARZON	Cavite, Laguna, Batangas, Rizal, Quezon
CALF	Comprehensive Agricultural Loan Fund
CARE	Coastal Area Resource and Enterprise Development Program
CARP	Comprehensive Agrarian Reform Program
CB	Central Bank
CB-SES	Central Bank - Supervision and Examination Sector
CBP	Central Bank of the Philippines **also known as the Bangko Sentral ng Pilipinas (BSP)*
CFP	Cotton Financing Program
CDLF	Cooperative Development Loan Fund
CGLF	Cooperative Guarantee and Loan Fund
CRB	cooperative rural banks
DA	Department of Agriculture **formerly the Ministry of Agriculture and Food (MAF)*
DANR	Department of Agriculture and Natural Resources **predecessor of the Department of Agriculture (DA)*
DAR	Department of Agrarian Reform
DBP	Development Bank of the Philippines
DC	Department of Commerce
DCCS	Dansalan College Community Service
DECS	Department of Education, Culture and Sports **currently the Department of Education (DepEd)*
DICT	Department of Information and Communications Technology
DOF	Department of Finance
DOH	Department of Health
DOLE	Department of Labor and Employment
DOP	Dominican Peso
DoTr	Department of Transportation
DSWD	Department of Social Welfare and Development

DTI	Department of Trade and Industry
DTl-BSMBD	Department of Trade and Industry - Bureau of Small and Medium Business Development
DUP	directly unproductive profit-seeking
e-KYC	e-Know Your Client
EFPS	electronic financial and payment services
EO	Executive Order
FAO	Food and Agriculture Organization
FI	financial inclusion
FIELDS-SCFO	Financial Incentives for Economic Livelihood Development Scheme for Small Coconut Farmers' Organizations
FISC	Financial Inclusion Steering Committee
BSP-FSS	Bangko Sentral ng Pilipinas - Financial Supervision Sector
GBL	General Banking Law
GDP	Gross Domestic Product
GFSME	Guarantee Fund for Small and Medium Enterprises
GNP	Gross National Product
GOCC	Government-owned and controlled corporations
GRT	gross receipts tax
GSK	Gulayan sa Kalusugan
IAF-PVTA	Integrated Agricultural Financing: Philippine Virginia Tobacco Association
IBRD	International Bank for Reconstruction and Development
IC	Insurance Commission
IDCs	investment development corporations
IGLF	Industrial Guarantee and Loan Fund
IMF	International Monetary Fund
IRF	Integrated Rural Financing Program
IRPP	Intensified Rice Production Program
ISAs	Integrated Services Associations
IT	Information Technology

KASAKA-OSY	Kabataang Sakahan para sa Kaunlaran: Out of School Youth
KBs	commercial banks
KKK	Kilusang Kabuhayan Kaunlaran
LBP	Land Bank of the Philippines
LDCs	less developed countries
LEAD	Livelihood Enhancement for Agricultural Development Program
LGU	Local Government Unit
MAF	Ministry of Agriculture and Food **currently the Department of Agriculture (DA)*
MASNAMARCO	Mallig Samahang Nayon Multipurpose Cooperative
MASS SPECC	Mindanao Alliance of Self-help Societies – Southern Philippines Educational Cooperative Center
MB	Monetary Board
MF	Ministry of Finance
MPS	marginal propensity/ies to save
NAFC	National Agriculture and Fisheries Council
NAMVESCO	National Market Vendors Cooperatives Service Federation, Inc.
NCR	National Capital Region
NEDA	National Economic and Development Authority
NFA	National Food Authority
NLSF	National Livelihood Support Fund
NNC	National Nutrition Council
NPSA	National Payment Systems Act
NRP	National Rootcrop Production Program
NSFI	National Strategy for Financial Inclusion
NSPP	National Soybean Production Program
OECF	Overseas Economic Cooperative Fund of Japan
OLS	ordinary least squares
OPT	Operation Timbang
OSU	The Ohio State University
PCA	Philippine Coconut Authority

PCA	prompt corrective action
PCAC	Presidential Committee on Agricultural Credit
	**predecessor of the Agricultural Credit Policy Council (ACPC)*
PCHC	Philippine Clearing House Corporation
PCI	per capita income
PCIC	Philippine Crop Insurance Corporation
PD	Presidential Decree
PDBs	private development banks
PDIC	Philippine Deposit Insurance Corporation
PDR	past due ratio
PhilSys	Philippine Identification System
PHP	Philippine Peso
PIADP	Palawan Integrated Area Development Project
PIDS	Philippine Institute for Development Studies
PIH	Permanent Income Hypothesis
PRSMP	Philippine Rural Savings Mobilization Project
PTA	Philippine Tobacco Authority
PVTA	Philippine Virginia Tobacco Association
PSA	Philippine Statistics Authority
QGFB	Quedan Guarantee Fund Board
RAR	risk asset ratio
RBAP	Rural Bankers Association of the Philippines
RBRRC	Rural Bank Review and Rationalization Committee
RBs	rural banks
RD$	Dominican Peso
RFC	Rural Finance Corporation
RFC	Rehabilitation Finance Corporation
RFI	Rural Financial Institution
RFM	Rural Financial Market
ROPA	real and other properties acquired
ROSCA	Rotating Credit and Savings Association

ROSCAs	Rotating Savings and Credit Associations
RSM	Rural Savings Mobilization
RSMP	Rural Savings Mobilization Project
SAP	Special Amelioration Program
SDC	Supervisory Data Center
SEC	Securities and Exchange Commission
SGBs	specialized government banks
SMBs	savings/mortgage banks
SN	Samahang Nayon
SPRD	Supervisory Policy and Research Development
SSLAs	stock savings and loan associations
SSS	Social Security System
STD	short-term debts
TAF	The Asia Foundation
TBAC	Technical Board of Agricultural Credit **predecessor of the Agricultural Credit Policy Council (ACPC)*
TBs	thrift banks
TC	transactions costs
Tk	Bangladeshi Taka
TLDP	Taal Lake Development Program
TLRC	Technology and Livelihood Resources Center
UCPB	United Coconut Planters Bank
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UPBRF	UP Business Research Foundation, Inc.
UPLB	University of the Philippines Los Baños
USAID	United States Agency for International Development
USD	United States Dollar
YCF	Yellow Corn Fund