Deepening Rural Financial Markets: Macroeconomic, Policy and Political Dimensions

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I. Introduction[1]

This paper examines key features of a macroeconomic environment, policy framework, and government and donor interventions conducive to rural financial deepening. The paper also explores typical difficulties, encountered in political arenas, in the adoption of the required macroeconomic and policy framework. In particular, the paper addresses specific consequences for rural financial market development of the programs for macroeconomic stabilization, structural adjustment, financial liberalization, and improvements in the framework of prudential regulation and supervision implemented by many developing countries in the past two decades.

Given the deplorable historical experience of efforts to promote rural credit programs within an environment of macroeconomic instability, financial repression, and distorting interventions, the paper recognizes that favorable macroeconomic and sector policies are a **necessary** condition for expanding the frontier of rural financial services. Recent experience in attempts to increase the outreach of rural financial markets indicates, however, that such policy reforms are not a **sufficient** condition for achieving socially desired levels of rural financial deepening. To examine the nature of the challenges, the paper builds on recognized lessons from the failures of rural credit programs during the period of protectionism-financial repression (1950s-early 1980s) and from the shortcomings of the period of financial liberalization (1980s-2000s), and it identifies new types of tasks for both governments and donors as well as conditions for improved outcomes for all participants in rural financial markets.

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[1] The author is Professor of Agricultural, Environmental and Development Economics, Professor of Economics, and Director of the Rural Finance Program at The Ohio State University. This document was prepared in response to the invitation to write a lead paper for the conference ***"Paving the Way Forward: An International Conference on Best Practices in Rural Finance"***, to take place in Washington, D.C., on 2-4 June 2003. The conference has been organized by the World Council of Credit Unions (WOCCU), within the framework of the Collaborative Research Support Program on Broadening Access and Strengthening Input Market Systems (BASIS CRSP), funded by the United States Agency for International Development (USAID). Brian Branch, Juan Buchenau, Heywood Fleisig, and J.D. Von Pischke offered valuable comments on a first draft of this document. Several of the ideas discussed here have also been presented in seminars at The Ohio State University, the Inter-American Development Bank, the Financial Services Project (SEFIR/DAI) in Bolivia, the SALTO/DAI Project in Ecuador, and the Meetings of the International Agricultural Economics Association, where comments by Jorge Daly, Douglas Graham, Paul Holden, Sergio Navajas, Richard Meyer, Fernando Prado, Rodolfo Quiros, Jorge Rodriguez, Vivianne Romero, Jacob Yaron, and Manfred Zeller, among others, are acknowledged. The author is solely responsible for the views presented in the document.

Addressing these further challenges will be required, in order to take advantage of the more conducive environment created by the **policy reforms** of the past few decades. Beyond these key policy dimensions, the challenges will involve an acceleration of the rate of **innovation** in financial technologies, improvements in the robustness of the **organizations** that will implement the new technologies, and establishment of the **institutional** framework and infrastructure necessary for the smooth operation of these organizations.[2]

In addition, the paper considers entirely new types of challenges, resulting from greater instability in international financial markets and from contagion through exogenous systemic shocks, which have added complexity to processes of financial development, at large, and of rural financial deepening, in particular.

Moreover, the paper identifies the threats and opportunities that emerge from renewed political concerns about rural financial services. To address these issues, the paper is organized around two critical changes in perspective. First, it incorporates a new vision about the role of finance in rural development. Efficient financial services matter, not as policy tools to pursue non-financial objectives, but on their own right, as intermediate inputs in processes of resource allocation and risk management.[3] In performing these intrinsic functions, efficient financial services indeed influence a multitude of socially-valuable non-financial outcomes. Paradoxically, however, if finance is coerced to achieve these outcomes or if is distorted in attempts to do so, it will usually deliver less valuable results.

Second, the paper incorporates a new vision about the role of the state in the promotion and regulation of financial markets. Price –interest rate– controls and administrative credit allocations are no longer favored. Direct production of financial services by the state has been seriously questioned. Instead, given an appropriate regulatory framework, competition is encouraged. A new critical role for the state is, indeed, acknowledged. There is a growing recognition that the establishment of a physical and institutional infrastructure that facilitates the smooth operation of financial markets is indispensable for rural financial deepening.

Many components of this physical and institutional infrastructure contain elements of **public goods** and, without state intervention, they would be underprovided. The paper identifies key components of this infrastructure, whose absence has delayed rural financial deepening, and it examines various ways in which policy frameworks may jeopardize or contribute to the development of the required ingredients.

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[2] This paper adopts the distinction between, on the one hand, ***institutions***, mostly the rules of the game and all other social, political or economic constraints that influence transactions and create the structures of incentives for human interaction and, on the other hand, ***organizations***, groups of individuals –political, economic, social and other types of bodies– bound by some common purpose to achieve certain objectives (North, 1990). Institutions are the rules, such as a structure of property rights. Organizations are the players, such as financial intermediaries.

[3] The paper adopts a ***"financial systems"*** perspective, in the sense that it argues that financial services matter *per se* and that rural financial deepening should be undertaken as a component of the broader process of development of the financial system (Von Pischke, 1998).

The acknowledgement that exclusive reliance on market forces may not result in the theoretically optimum rate of expansion of this infrastructure must be accompanied, however, by recognition of the formidable political and technical difficulties of state intervention in several of these areas. Incorrectly designed interventions may be, moreover, quite counterproductive.

Beyond a conducive policy framework, the paper emphasizes the importance of innovations in financial technologies, in allowing a cost-effective expansion of the frontier of rural financial services. In addressing this question, the paper explores the challenges that governments and donors face in promoting alternative types of changes in financial production functions. On the one hand, these state efforts may be needed, in response to the potentially strong externalities that emerge in most processes of knowledge generation and human capital formation. On the other hand, these state efforts may be extremely problematic, in view of the difficulties of correctly anticipating the most cost-effective types of new knowledge.

In solving this dilemma, the **interactions** between innovations and the robustness of the organizations involved are critical. Weak organizations will not be appropriate channels for the adoption and implementation of new financial technologies. Robust organizations, in contrast, will have a greater ability to both engage in innovation and implement new knowledge and practices generated elsewhere. Through choices about the regulatory framework, the channeling of public funds, and the kinds of assistance provided, governments and donors have a substantial influence on the types of organizations that emerge and are able to successfully compete. The macroeconomic, policy, and political framework strongly influences these organizational outcomes and, therefore, the pace of rural financial deepening.

In addition to this Introduction, the paper contains five sections. Section II identifies different motivations behind a growing interest in rural financial deepening and the threats that may result from an incorrect understanding of the role of finance. Section III acknowledges the emergence of new views, policy environments, and experiences in rural finance and derives lessons for the future. Section IV discusses changes in perspective about both the role of finance in rural development and the role of the state in promoting financial deepening. Section V identifies three gaps in the provision of rural financial services (inefficiency, insufficiency, and lack of feasibility gaps) and suggests different types of approaches to fill each one of these gaps. Section VI discusses in detail specific state interventions needed to promote the demand and the supply of financial services.

II. A Growing Interest in Rural Financial Market Deepening

There has been a growing interest, around the developing world and economies in transition, in the promotion of rural financial deepening.[4] International development banks and bilateral foreign assistance agencies, including the United States Agency for International Development (USAID), the governments of developing countries, and professionals and academics interested in agriculture, rural poverty, and financial development have focused increasing attention on the thin formal flows and, in some cases, even scant total –formal and informal– flows of agricultural credit as well as on the narrow delivery of diverse types of financial services to the rural populations of these countries. Given these concerns, there has been a growing interest in the design and implementation of cost-effective and sustainable mechanisms to overcome what appear to be almost intractable obstacles frequently encountered in the development of rural financial markets in these countries.

Moreover, attention has gradually shifted, from the earlier exclusive emphasis on credit, towards a growing recognition of the importance of different types of **financial services**, including deposit facilities and similar means to accumulate liquid reserves and hold stores of value, payments instruments and opportunities to send and receive remittances and to exchange currencies and, in general, mechanisms to manage liquidity and cope with risk (Patten and Rosengard, 1991; Adams, 1995; Robinson, 1998). There have also been parallel concerns with the absence of insurance markets and other tools to manage and cope with risk as well as a growing acknowledgement of the intricate connections between financial and insurance markets (Townsend, 1995; Zeller *et al*., 1997; Thompson, Miranda, and Gonzalez-Vega, 1998; Skees, 2003).

This growing interest has been accompanied by a few rural financial market projects and some isolated interventions as well as by some actions implemented mostly to improve the policy and institutional environment for the emergence of rural financial transactions. The task has not been easy, however, and so far the results have been mixed. These partially disappointing results should not be surprising, nevertheless, given the complexity and magnitude of the challenges faced in the development of rural financial markets.

Indeed, both an emerging new understanding of the difficulties faced by potential participants in rural financial transactions and a comprehensive evaluation of the historical experience with rural financial market interventions suggest that the successful promotion of rural financial markets will require **systemic** rather than isolated efforts, with related actions being undertaken on several fronts. In practice, however, specific donor and government programs have frequently lacked coherence, thereby missing opportunities for mutually reinforcing actions.

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[4] Shaw (1973) introduced the term ***financial deepening*** to describe a process of expansion of financial transactions through markets at a pace faster than the growth of non-financial activities. The opposite of financial deepening is ***financial repression***. Rural financial deepening refers here to an expansion in financial transactions of all kinds in the rural areas, to reach broader clienteles, provide wider kinds of services, and offer additional contract terms and conditions.

Indeed, quite frequently, these isolated rural financial market interventions have simply been responses to specific political demands or mere appendages to non-financial projects. At worst, particularly when these interventions have ignored the true nature of financial transactions or the actual difficulties encountered in their emergence, they have undermined what other actions to promote rural financial deepening have been attempting to build.

To gain a better understanding of good or bad reasons to promote rural financial development and of successful or unsuccessful approaches in achieving this goal, the following sections examine alternative motivations behind this renewed interest in rural financial deepening. While, most of the time, the broad objectives pursued are worthwhile, the approaches adopted from the partial perspective of particular interest groups are frequently inadequate.

2.1 The decline of agricultural credit

In effect, the motivations for these isolated and diverse policy interventions have had different roots. First, there have been concerns about an insufficient supply of **agricultural credit**. In this case, policymaker concerns have in part reflected several developments of the past three decades. In addressing the politically difficult challenges that have emerged from these developments, it is critical to adopt a correct interpretation of the lessons that they embody. A growing consensus about this interpretation has emerged in recent years (Yaron, Benjamin, and Piprek, 1997; Yaron, Benjamin, and Charitonenko, 1998). These developments have included:

(a) marked declines in the international and domestic supplies of formal agricultural credit, in part related to reductions in the agricultural credit portfolios of multilateral development banks and bilateral donors and in part related to reductions in domestic fiscal transfers for this purpose (Rice, 1993),

(b) the substantial losses and eventual decapitalization of most state-owned agricultural development banks and the failure of most targeted farm lending programs used as channels for government and donor funds (Gonzalez-Vega and Graham, 1995), and

(c) the slow supply responses of private commercial banks, in expanding their operations toward the rural areas, following financial liberalization programs and/or the demise, closure, or privatization of state-owned agricultural development banks (Baydas, Graham, and Valenzuela, 1997).

These reductions in formal agricultural credit supplies have taken place at a quicker pace than the characteristic reductions of the share of the value added by agriculture in the generation of the gross domestic product (GDP). The reductions have been substantial, even after one recognizes that the earlier credit subsidies, combined with the **fungibility** of funds, had created incentives to substitute loans for self-financing and to deviate loan funds from agricultural to non-agricultural purposes.

Given the multiplicity of sources and uses of funds among low-income rural households, it is not possible to easily establish the actual marginal uses of loan funds (Von Pischke and Adams, 1983; Buchenau, 1999). Because distorted incentives disappeared with the elimination of interest rate subsidies, figures on sector uses of loan funds must be interpreted with caution. Evidence of the resulting measurement problems is, among others, the poor correlation observed between figures on agricultural credit and on agricultural output (*e.g.*, Gonzalez-Vega and Torrico, 1995). Although not as large as some figures may thus suggest, nevertheless, most countries have experienced a net reduction in bank funding for agriculture.

Furthermore, although increasing rural credit flows have been available from input suppliers and crop market intermediaries, who have had access to commercial bank loans, these flows have not been sufficient to replace bank funds, and there is a consensus that agricultural credit flows have been shallow (Zeller, 2003).

The evidence is also strong about the extent of **self-financing** among the rural population, particularly once funds from friends and relatives are included in this category (Gonzalez-Vega, Guerrero, Vasquez, and Thraen, 1992; Gonzalez-Vega, Ladman and Torrico, 1997; Olmos, 1997; Owens, 2002). While the large extent of self-financing may be evidence of little access to formal sources of credit, it also reveals a significant savings capacity in the rural areas of these countries. Earlier efforts towards the promotion of rural financial services were based on the wrong assumption that this capacity does not exist. Its existence, in turn, generates a clear demand for safe and convenient deposit facilities in those areas.

Moreover, much of the infrastructure and most of the organizations for the provision of formal financial services in the rural areas have also disintegrated in the past three decades. As a result of heavy losses, most **state-owned agricultural development banks** and specialized credit programs withered away, disappeared, or have only been sustained by costly fiscal transfers and recapitalization. Because it is so difficult to create institutions, this loss of rural organizations should be a cause of greater concern than the actual decline in the flows of funds.

Where these banks had historically been the major source of agricultural credit, their decline had important consequences. In some countries, the contraction of their loan portfolios left behind a **lost clientele** of regularly performing small and medium-size borrowers, who disappeared from formal financial markets (Gonzalez-Vega and Graham, 1995). Although these small and medium-size clients of the state-owned development banks never represented a significant proportion of the total rural population, they still reflected a strong legitimate demand for rural financial services, as was frequently evidenced by their exemplary credit histories and repayment records. Because major difficulties are encountered in creating long-lasting credit relationships and because the costs of accumulating the information capital required to expand the frontier of rural finance are high, the loss of access by these clients implied important social costs.

In contrast, most of the losses from default at the state-owned development banks grew out of the delinquency of their largest borrowers (Ladman and Tinnermeier, 1981; Bourne and Graham, 1984; Vogel, 1984; Gonzalez-Vega and Mesalles, 1993). The rent-seeking behavior of these politically-influential producers thus generated a **negative externality**, because their actions led to the ruin of the only organizational infrastructure available to the smallest clients.

Furthermore, losses from the small-borrower portfolios of the state-owned banks can be mostly attributed to lack of bureaucratic incentives to screen and monitor applicants and collect the loans, to borrower perceptions about the resulting lack of sustainability of the programs, and to other inappropriate **signals**, such as loan pardoning and repayment moratoria, which undermined incentives to repay (Aguilera-Alfred and Gonzalez-Vega, 1993). Because this behavior subverted a culture to repay loans, it resulted in a regrettable destruction of **social capital**.

Recently, new and more cost-effective organizations have allowed a gradual return of some of these lost clienteles to formal financial markets (Gonzalez-Vega, Jimenez and Mesalles-Jorba, 1989; Quiros and Jimenez, 1996). The stigma associated with their earlier status as clients of state-owned organizations has frequently obstructed, however, their access to the services of some of the new organizations. Moreover, the new microfinance organizations that are successfully reaching these small borrowers have needed substantial investments to signal their serious intent to enforce loan contracts (Gonzalez-Vega, Schreiner, Meyer, Rodriguez, and Navajas, 1997; Pleitez-Chavez, 2000).

The state-owned agricultural development banks were also destroyed by their inability to charge interest rates that would cover their operating costs and losses from default and protect their portfolios from the eroding impact of inflation. Over time, in many countries the real value of their portfolios became insignificant. One lesson from this experience is that the political priority granted to an organization at a particular moment does not guarantee its permanency. In fact, too much **political** interest in the goals of the state-owned development banks actually hurt their chances to survive.

The terminal contraction of most formal agricultural credit portfolios coincided with the structural adjustment programs and financial liberalization efforts of recent decades. Some, including those with vested interests in the old regime, have blamed the policy reforms for the declining supplies of agricultural credit and have called for a return to the earlier protectionist policies. These claims are unfounded, however. The state-owned banks were already in serious problems –unsustainable– before the arrival of financial liberalization. The reforms simply made their lack of sustainability evident. A return to the earlier policies would only repeat the mistakes of the past. At the same time, nevertheless, following financial liberalization and the demise of the state-owned agricultural development banks, there has been a slow private supply response. Private commercial banks and other financial intermediaries have not rushed to the rural areas to fill the vacuum left by the disappearance of the state-owned credit programs.

The dual observations of the shortcomings of the state-owned development banks and of the limited supply response of the private banks have led to a growing consensus that financial policy reform is a necessary but not a sufficient condition for sustainable rural financial deepening (Gonzalez-Vega, 1993; Westley, 1994).

2.2 Access to financial services and rural poverty

A second motivation of the growing interest in rural financial deepening has been an interest in poverty alleviation. The relationships between poverty and finance are quite complex, however, and incorrect perceptions and expectations can have rather counterproductive effects.

In this connection, it is most important to recognize that, despite major earlier attempts to expand the supply of agricultural credit and despite the massive use of public funds for this purpose, the majority of the rural population of the developing countries has actually **never** had access to formal financial services. On average, 10 to 15 percent of all rural households in developing countries had ever had access to formal credit by the mid-1970s and this proportion has not changed much over time (Donald, 1976; Quirós, 1991; Muñoz, 1994; Sánchez-Schwartz, 1996; Sánchez, Cuevas and Chaves, 1998; Zeller and Sharma, 1998; Navajas and Gonzalez-Vega, 2002; Wenner, Alvarado and Galarza, 2002; Zeller, 2003). The proportion that has had access to a broad range of sustainable financial services has been less. The proportion of the rural poor who have gained this access would be even less.

Thus, the unquestionably basic question is: **why** have the rural populations of these countries never had adequate access and continue not to have access to formal financial services, despite their legitimate demands for various types of loans, deposit facilities and other financial products? The answer must lie in the substantial **difficulties** that explain this generalized outcome. This paper focuses on the macroeconomic, policy and political factors needed to overcome these difficulties. Moreover, once the reasons for this situation are better understood, the critical challenge will be to effectively and sustainably bring about increases in the supply of financial services for this population.

Further, the recognition that (a) the largest incidence and depth of poverty is found in the rural areas of these countries and that (b) the structural adjustment programs of recent decades have been necessary but may not have been sufficient to incorporate the rural poor into processes of rapid, broadly-based and sustainable economic growth have been important motivations for growing policymaker focus on rural financial deepening and on its role in poverty alleviation (Grootaert and Kanbur, 1990). While these concerns provide a strong motivation for the promotion of rural financial deepening, this motivation also poses important **threats**, as many calls for action have been based on incorrect perceptions and expectations about the role of finance in the task of poverty alleviation (Gonzalez-Vega, 1998a).

Indeed, the supply of formal financial services and **poverty** are related in complex ways (Gonzalez-Vega, 1998a; Zeller *et al*., 1997). Sometimes, formal financial services can release credit constraints and facilitate a fuller exploitation of existing productive opportunities. When this is the case, some households can lift themselves out of poverty. Other times, financial services can assist in household risk management strategies, thereby stabilizing incomes and encouraging productive investment (Zeller and Meyer, 2002; Zeller, 2003). Poverty and/or vulnerability to risk would be alleviated in these cases. Some other times, financial services can assist in processes of physical and human capital accumulation and allow households to overcome poverty traps (Maldonado, Gonzalez-Vega and Romero, 2002). Indeed, these are expected outcomes when financial services actually play their intrinsic functions. These outcomes will be efficient and sustainable when the associated financial services are efficient and sustainable.

When productive opportunities do not exist, however, **repayment capacity** will usually be missing and the enforcement of debt contracts will impoverish borrowers. Depending on the circumstances, credit can thus increase or decrease poverty. Moreover, *per se*, typically loans cannot create productive opportunities, particularly when other constraints are binding. Credit cannot build the roads needed to bring the crop to market and that are missing; credit cannot discover the farming technology that does not exist; credit cannot generate key inputs that are not available; credit cannot create or destroy comparative advantages or change consumer preferences (Gonzalez-Vega, 1994 and 1998a).

When, in order to avoid the unpleasant effects of foreclosure, loan contracts are not enforced, social capital is eroded. **Social capital** refers to the complex set of social arrangements that support market and non-market interactions among the members of a given community, their common ways of deciphering reality, which reduce transaction costs, and their shared beliefs and perceptions of fairness, which facilitate the design, interpretation, and enforcement of contracts. These arrangements usually include mechanisms for punishing default that go beyond available legal sanctions. Common beliefs about the importance of fulfilling debt contract obligations and the social sanctions that accompany default are frequently described as the ***culture of repayment***. The depth of this culture matters, not only for the emergence of rural credit transactions, but also to the extent to which it shapes social attitudes towards contracting at large.

Costly credit programs that ignore the true nature of the relationships between finance and poverty may actually have little or no impact on poverty alleviation. In general, financial services –particularly credit– may increase or reduce poverty, depending on the circumstances. When the interventions are based on incorrect perceptions about the nature of these relationships or reflect wrong expectations about the role of finance in the process of poverty alleviation, they can be and have frequently been counterproductive.

The frontier of financial services does not expand in uniform ways. An expansion of the frontier in ways that will benefit the rural poor will need, therefore, further clarification of the potential role that improved access to financial services may play in allowing the rural populations to lift themselves out of poverty (*i.e.*, it is necessary to ascertain when and how finance matters in poverty alleviation). Given this clearer understanding, specific actions could be undertaken to reduce the **rural lag** in financial sector development.

As discussed in Section III, some of the calls for action have indeed reflected a better understanding of the challenges involved, as new conceptual frameworks in the fields of finance and rural organizations have provided a keener awareness of the contributions and difficulties of rural finance and of the determinants of poverty. In addition, some calls for action have reflected optimistic expectations about new promising approaches, based on opportunities insinuated by the relative success of some experiments in microfinance. The majority of the successful microfinance programs have been urban-based, however, and the challenges of transferring the new lending technologies to the rural areas are not trivial. These challenges will be addressed in Section VI. [5]

2.3 Aggregate financial deepening

Third, from still another perspective, rural financial deepening is mostly viewed as a key component in the process of **financial development** at large. The motivation in this case has been the promotion of further aggregate financial deepening, a key ingredient in processes of market development and integration. The basic assumption has been that greater financial deepening increases aggregate income and accelerates economic growth. This is the "financial systems" perspective adopted in this paper. Because public attention must be attracted and scarce resources must be spent in any effort to expand the frontier of financial services, however, society's preferences about where to expand the frontier matter. The argument here is that an expansion of the rural dimensions of the frontier should be part and parcel of efforts to deepen finance at large (Von Pischke, 2003).

The supply of efficient, sustainable, and broadly-based financial services is particularly important in rural areas, given high risks and transaction costs in most rural markets for goods, services, assets, and factors of production, which result in large degrees of market fragmentation. That is, these costs and risks are responsible for low levels of **market integration** and for a wide dispersion of the marginal rates of return on resource uses (McKinnon, 1973). Wide gaps separate the marginal rates of return available to deficit and to surplus units. These gaps signal numerous unexploited opportunities for improving the productivity of available resources. Financial intermediation reduces these gaps in marginal rates of return and, as a result, aggregate income increases.

[5] Moreover, this is only one of six lead papers for the conference. The other papers will address some of these issues in greater detail.

Monetization (currency exchanges and payments services), intermediation (deposit facilities and loans), risk management, and related financial services are powerful tools for the integration of these markets. The efficient provision of financial services is pivotal when investment opportunities and wealth endowments diverge, as is frequent among the heterogeneous firm-households found in the rural areas of developing countries. This heterogeneity means that different households will benefit from different types of financial services. The key role of financial intermediation is to facilitate **transfers** of purchasing power across surplus (depositor) and deficit (borrower) units, in ways that improve resource allocation, thereby increasing the productivity of resources throughout the economy (Gonzalez-Vega, 1986). In this task, deposit facilities are as important as credit services. Given the traditional neglect of deposit services, credit unions and other intermediaries that mobilize savings have played a key role in this process.

Aggregate economic growth and efficiency are also influenced by financial transactions in their role in agglomerating capital, selecting projects most likely to yield the highest returns, monitoring borrowers (investors), enforcing contracts, transferring, sharing, and pooling risks, and promoting diversification (Stiglitz, 1993). Financial services contribute to efficient intertemporal firm-household decisions concerning savings (postponing consumption), the disposition of wealth (accumulation of different types of assets), and investment (assets accumulated to take advantage of specific productive opportunities). Expansion of the frontier of financial services into the rural areas can also facilitate portfolio diversification for the management of risk. If the performance of financial systems can be judged in terms of their efficiency, stability (sustainability) and outreach, this rural expansion of the frontier is the most important remaining challenge in terms of outreach.

In the end, rural financial services matter as intermediate inputs in these processes of market integration. The outputs will be more efficient allocations of resources, more stable consumption, less poverty overall, and higher rates of economic growth. Government and donor expenditures will be motivated by these expected outcomes. This paper argues that these results will be best achieved when finance is asked to do what it is supposed to do and when rural financial deepening is approached as a component of overall financial development.

2.4 Multiple objectives, multiple obstacles

Recent interest in rural financial deepening has thus grown out of a **multiplicity** of concerns. In some cases, the motivation behind the calls for action has been an interest in the revitalization of agriculture. These calls have been based on the belief that increases in the supply of agricultural credit will contribute to an acceleration of the rates of growth of incomes and of employment in agriculture. This will indeed be the case under some circumstances, but it will not always be true. The challenge for policymakers is to understand **when** finance matters for agricultural development and when finance, by itself, will not achieve this result or it may actually be counterproductive.

In other cases, the motivation behind the calls for action has been a keen interest in an alleviation of rural poverty. These calls have sprung from the observation of the very limited breadth and depth of outreach of formal financial organizations in the rural areas of developing countries. Indeed, larger supplies of credit and of other financial services may, under some circumstances, contribute to the alleviation of rural poverty, but this will not always be the case. Again, the challenge will be to understand **when** finance matters for poverty alleviation and when it does not.

From still a third perspective, the expansion of the frontier of financial services into the rural areas is simply required to complete the country's process of financial development. This task is urgent, particularly in view of the **urban bias** of earlier financial interventions. Deeper rural financial markets will reduce transactions costs and facilitate greater degrees of factor and product market integration, thereby inducing increases in factor productivity and facilitating the management of risk across the economy.

While this multiplicity of concerns has encouraged strong interest in rural financial deepening, it has also been reflected in a multiplicity of **constituencies**, each one demanding some particular form of intervention. The accumulation of lobbying pressures can make successful policymaking a complex and difficult task. Multiple and varied interest can easily lead to inconsistent intervention objectives and to counterproductive outcomes.

Furthermore, the multiplicity of concerns has also reflected different dimensions of the challenges of rural financial deepening. Some of the **difficulties** encountered are mostly associated with the material conditions and characteristics of agriculture (Binswanger and Rosenzweig, 1986; Binswanger and Deininger, 1995). The heterogeneity of human capital endowments and entrepreneurial abilities and of soils and climate across and within regions, the seasonality of sowing and harvest cycles, the high variability of weather, spatial dispersion, a high incidence of location-specific factors and influences beyond the borrower's control on yields, and the covariance of exogenous shocks hinder financial transactions based on agriculture. If the authorities wanted to be responsive to specific concerns about the role of finance in the revitalization of agriculture, they must understand the nature of these difficulties and they must design mechanisms that directly address these specific obstacles.

Similarly, some of the difficulties encountered in expanding the frontier of rural financial services are mostly associated with features of poverty. The imperfect information possessed by lenders about the potential clients, the lack of separation of household and business, the small size of the transactions, and the limited wealth of rural households, who do not own assets that are acceptable as traditional collateral on loans, hinder financial transactions with the rural poor (Fleisig and de la Peña, 2003).

Again, if the authorities wanted to be responsive to specific concerns about the role of finance in addressing rural poverty, they must acknowledge the specific nature of these particular difficulties and encourage the design of mechanisms that directly address these obstacles. The purpose would be to facilitate the emergence in these market segments of cost-effective financial transactions and of the functions that they intrinsically perform, not to abuse finance in the pursuit of non-financial objectives, when financial services are not the appropriate tool.

In general, the limited development of rural financial markets reflects shortcomings and limitations of the physical infrastructure (*e.g.*, roads, communications), stock of human capital (*e.g.*, education), and institutional infrastructure (*e.g.*, property rights, contract enforcement) found in the rural areas of developing countries. The absence of the required physical and institutional **infrastructure** increases transaction costs and accentuates the information, incentive, and contract enforcement problems that make financial transactions difficult. If the authorities wanted to adopt a financial systems perspective, they must consider the links between, on the one hand, the provision of some basic public goods and of the required institutional infrastructure and, on the other hand, the expansion of rural financial markets.

Given the costs and difficulties of rural financial transactions and the numerous sources of market and government failure encountered in attempts to expand the frontier, legitimate but unsatisfied demands for financial services will exist, at several levels and in different subsectors of the rural environment. Therefore, to be able to design and implement effective interventions, which attempt to expand the frontier of rural financial services in specific dimensions, the authorities must acknowledge and address specific **binding constraints**. The intensity of these constraints may differ with each different motivation to expand the frontier (agricultural development, poverty alleviation or financial deepening).

In summary, numerous and substantial difficulties impede further rural financial market deepening. These difficulties lead to unsatisfied excess demands for financial services, from a number of different perspectives (*e.g.*, agricultural undertakings, poor households, long-term investment). Several constituencies have voiced their interest in reducing these excess demands, along particular margins. The challenges and opportunities vary in each case. Partial approaches, in isolated efforts to correct for specific excess demands for rural financial services may, however, not always be successful and sustainable. Several reasons for this are discussed below. If this is the case, a comprehensive, **systemic** approach may be required for a sustainable expansion of the frontier of rural finance. This approach will require two fundamental changes of attitude.

III. New Conceptual and Policy Frameworks

The desired acceleration of the process of rural financial deepening represents a complex challenge. Success will require the adoption of a contemporary perspective on the role of financial services in rural development and of the obstacles encountered in the materialization of rural financial transactions as well as a straightforward acknowledgement of the lessons from past experience. It has been difficult, however, to bring into rural financial markets the robust principles and proven best practices that have been gradually incorporated in other segments of emerging financial markets and in some urban microfinance activities.

There has been, indeed, a **rural lag**, not only in the delivery of a broad array of financial services, but also in the diffusion of ideas and in the implementation of actions conducive to more efficient, sustainable, and broadly-based rural financial markets. In part, this lag reflects the greater difficulties of the task. In many countries, moreover, well-entrenched vested interests and re-election considerations have slowed down the arrival of contemporary views into the practice of rural finance. New perspectives are needed, however, in view of the failures and shortcomings of those earlier attempts to expand the frontier.

In the implementation of the principles incorporated in a contemporary perspective, each country's initial conditions must be taken into account. These **initial conditions** reflect:

(a) the extent of the intrinsic difficulties arising from geography, culture, and the stage of economic development of the country,

(b) the frequency and magnitude of exogenous shocks that influence risk profiles and opportunities for diversification in the country,

(c) the bad habits, unproductive attitudes, distortions, and barriers to financial transactions induced by inappropriate policies and interventions, and

(d) the relative availability of means to overcome these difficulties, resulting from each country's resource endowments, historical experience, and physical and institutional infrastructure.

In each country, the actual nature and extent of the rural lag in the process of financial deepening reflects a particular combination of these circumstances. The specific combination of initial conditions should influence, in turn, the choice of appropriate policy packages to be adopted in order to promote the desired expansion of the frontier of financial services into the rural areas of each country.

3.1 Elements of a better diagnosis

In meeting the challenges of promoting rural financial deepening, there are both obstacles to confront and reasons for hope. Some of these sources of optimism come from recent theoretical developments, which have made possible a better **diagnosis** of the difficulties to be overcome. These new conceptual frameworks include:

(a) recent contributions to our understanding of the actual nature of financial market problems, based on theories about information, institutions, and incentives. These theories have allowed a finer identification of the sources of financial **market failure** and a clearer understanding of the nature of other obstacles to financial market development, not necessarily related to market failure (Hoff, Braverman, and Stiglitz, 1993; Besley, 1994; Conning, 1999);

(b) a widely-accepted understanding of the sources of financial policy mistakes and other instances of **government failure** (Gonzalez-Vega, 1994). Lessons about actual experience with misguided rural financial market interventions have bolstered the desire not to repeat the mistakes of earlier strategies (Adams, Graham, and Von Pischke, 1984; Adams and Von Pischke, 1992), and

(c) improved methods for **empirical** research, which have resulted in both a better measurement of the extent of the obstacles and a better understanding of the empirical relationships among relevant variables (Udry, 1990: Deaton, 1991; Gonzalez-Vega, Rodriguez-Meza, Pleitez-Chavez and Navajas, 2002).

In general, information, incentive, and contract enforcement problems make financial transactions more complex –costly– than most other forms of economic interaction. In rural environments, particularly in connection with agriculture, financial transactions are especially costly for all market participants. To unleash the potential contributions of financial markets to rural development, these costs and risks must be reduced. The historical experience shows that these costs and risks cannot be reduced by **decree**. Even when government action is needed, new types of intervention are required.

Financial transactions are difficult when **information** is imperfect and mechanisms for **contract enforcement** are missing or are too expensive. If the probability of default is high or if it cannot be forecasted well and if the potential lenders are risk-averse, loans will not be granted and a market will not emerge. If, in addition, the opportunities for **moral hazard** are substantial, lenders will be reluctant to engage in financial transactions unless sufficient incentives to repay can be elicited. That is, lenders will introduce terms and conditions in credit contracts that embody **incentives –**equivalent to deductibles in insurance contracts– for the fulfillment of borrower obligations. These terms and conditions restrict access to loans to particular classes of clients (Navajas, 1999). Moreover, if the information required for screening or monitoring borrowers is too costly, lenders may restrict the loan amount they are willing to grant, engaging in loan-size **rationing**, or they may not lend to particular applicants at all (Gonzalez-Vega, 1976 and 1977).

If, as is frequent in the rural areas of developing countries, the required **institutional infrastructure** is missing, then the costs of contract enforcement are too high, even prohibitive, and some potential borrowers do not gain access to formal loans (Fleisig, 1995; Fleisig and de la Peña, 1996). In lieu of encompassing legal frameworks, social mechanisms are then used for contract enforcement.

In these environments, given their information and enforcement advantages, financial services are provided by numerous **informal** sources, which meet some demands from rural firm-households (Adams and Fitchett, 1992; Bouman and Hospes, 1994; Besley and Coate, 1995). Informal loans are usually timely, reliable, and levy low transaction costs on borrowers. Typically, however, informal lenders do not provide all the wide array of services for which (latent) demand exists, including safe deposit facilities, convenient mechanisms to transfer funds, and certain types of credit (especially large, long-term loans). The costs of informal financial services are also high, as revealed by the strong demand that materializes when cheaper semiformal and formal services are offered by organizations still able to cover their costs with the interest rates that they charge. These informal transactions are only feasible in local environments and, as a result, rural financial markets remain fragmented.

These shortcomings of informal financial arrangements reflect the very features that make them competitive in **local** environments: they are grounded in a community and are thus limited by the wealth constraints and the covariant risks of the local economy. As a result, informal finance is shallow; its services are valuable but are not deep enough in scope (geographically, across products, and over long terms) and are vulnerable to the covariant risks of locally-based transactions. Where only informal finance exists, many opportunities to improve resource allocations are left unexploited. Thus, informal finance is not always a good vehicle for investment and is not sufficient for rapid rural growth. Nevertheless, if informal financial markets are repressed, rural welfare declines. Rather than destroy informal finance, therefore, new formal financial services must complement the valuable contributions of informal sources. In the end, there is no substitute for the development of highly integrated financial systems (Rhyne and Otero, 1994).

3.2 Complex and interrelated obstacles and breakdowns

Imperfections and asymmetries of information, a lack of compatible incentives between borrowers and lenders, and the absence of mechanisms for contract enforcement contribute to the difficulties encountered in supplying rural loans. Recent theoretical contributions have emphasized several dimensions of **market failure** that can be attributed to these imperfections of financial markets (Stiglitz, 1993). Because of extremely simplifying assumptions, however, most of these contributions have not generated **robust** policy recommendations that make it feasible to address these imperfections in a cost-effective manner (Besley, 1994). The historical experience suggests, moreover, that ostensibly desirable government interventions can easily go wrong, with their costs overcoming the gains from the attempted correction of market failure (Gonzalez-Vega, 1993 and 1994).

Moreover, most of these instances of market failure do not appear to be amenable to straightforward and easy correction through government intervention. Governments face the same risk, information, incentive, and contract enforcement problems as private lenders do plus a few additional difficulties of their own. Typically, they do not have the political **credibility** to commit to the full enforcement of loan contracts, and they are frequently vulnerable to **rent-seeking** assaults. Moreover, government organizations face formidable **agency** problems in creating incentives for public-service loan officers to screen and monitor borrowers and collect loans diligently.

In summary, constraints to financial market development emerge from a set of complex, interrelated, and reinforcing **obstacles and breakdowns** (Gonzalez-Vega, 2002). These breakdowns include market failure of older types (*e.g.*, market power, externalities, and the nature of information as a public good) and market failure of newer types (*e.g.*, adverse selection, moral hazard). These breakdowns also include failures of collective action (*e.g.*, the inability of depositors to constrain banks) as well as instances of policy failure (*e.g.*, rent-seeking, bureaucratic incentives, directly-unproductive profit-seeking activities). Moreover, high transaction costs result from a deficient physical infrastructure and from insufficiently defined property rights, absence of mechanisms to define and enforce contracts, and other missing institutions.

Not all the difficulties for the emergence of rural financial transactions result, however, from imperfect markets and incomplete institutions. By their own nature, financial services are costly to produce. Their intertemporal and contingent character means that the terms of financial transactions cannot be simply summarized by a price and a quantity. Scarce, expensive resources are needed to define, monitor, and enforce contracts with complex terms and conditions. High transactions costs result from long distance and a low density of population. Sometimes these costs may be prohibitively high. Efficient **financial technologies** are then needed to combine the required inputs in a cost-effective manner and to overcome these obstacles to financial transactions.

Moreover, even where information and contract enforcement advantages exist, limited local purchasing power (wealth constraints) reduce the scale and scope of financial transactions. Combined with the **systemic risk** from covariant local incomes and cash flows, these wealth constraints mean that informal financial transactions will not be sufficient to remove credit constraints. Promoted by appropriate state interventions, rural financial deepening must result from and be part of the broader process of the country's financial development.

3.3 More hospitable policy environments

Another source of hope has been the implementation of policy reforms in the past couple of decades. First, **structural adjustment** programs have been implemented in many developing countries, with various degrees of success. In many countries, these policy reforms have removed several of the most harmful interventions associated with the previous protectionist environment. Earlier, numerous distorting policies had severely penalized agriculture and the rural population (Krueger, Schiff, and Valdes, 1991).

The **urban bias** of those protectionist policies –in particular, of import substitution industrialization– had further exacerbated the inherent difficulties of rural financial market development (Adams, 1998). Policy reforms that improve the performance of the agricultural sector can go a long way towards facilitating rural financial market deepening. As with financial reform, in the case of agriculture, however, the policy reforms have been a necessary but not a sufficient condition for improved productivity in agriculture and for the reactivation of economic activity in the rural areas. The acceleration of rural financial deepening cannot occur without additional interventions to improve the productivity of resources in agriculture. These must also be interventions of the new style, without the distorting features of the earlier protectionist approaches.

Second, in several countries, **financial reforms** have reduced the burden of the earlier repressive regulation (Shaw, 1973; McKinnon, 1973). Distorting interventions had for a long time afflicted rural financial intermediaries and had constrained their efforts to reach marginal clienteles in numerous ways, thereby complicating their tasks beyond what would be expected from the intrinsic difficulties of rural financial transactions themselves (Gonzalez-Vega, 1993; Frenkel, 1994). Had these constraints not been lifted, the innovations in financial products and procedures –typically associated with the development of urban microfinance– and the pricing –interest rate– policies required for the expansion of the frontier of rural financial services would not have been possible.

Indeed, in the past two decades, financial liberalization and other financial policy reforms in many developing countries and economies in transition have opened spaces for innovation in financial technologies that had previously been frustrated by financial repression (Westley, 1999). Interest rate ceilings –frequently combined with high rates of inflation or the overvaluation of the domestic currency, restrictions on entry into financial intermediation and constraints on competition, portfolio quotas and other quantitative and qualitative controls on credit portfolios as well as controls on the terms and conditions of loan contracts and on banking procedures– had discouraged experimentation and innovation in financial technologies. These restrictions did not allow financial intermediaries to operate on market terms and in ways that would have allowed them to reap the rewards from the risky introduction of new products and financial technologies. The expansion of the frontier was thus held back by the earlier policies in various ways.

Financial reforms, however, have arrived into the rural areas more slowly than to other sectors of the economy. In many quarters, there is still a deep-felt view that farm-households are too poor to save and to demand deposit facilities or to be encouraged by attractive combinations of returns –deposit interest rates, safety and convenience– to acquire financial assets, and that they cannot pay market interest rates on loans or determine by themselves the best possible uses for loan funds. As a result, in some countries, protectionist interventions have not been fully dismantled, while in other countries strong political pressures frequently call for the reintroduction of the earlier repressive policies or lobby for loan moratoria. These conservative views block the development and implementation of a new perspective about the role of the state in the promotion of rural financial deepening (Gonzalez-Vega, 1999a).

Development of the framework of **prudential** regulation and supervision required for the safe and sound operation of rural financial intermediaries has lagged behind the expansion of the sector (Rock and Otero, 1997; Berenbach and Churchill, 1997; Churchill, 1997; Jansson and Wenner, 1997; van Greuning, Gallardo, and Randhawa, 1999). A prudential framework that promotes the operation of robust financial intermediaries is necessary, however, given the importance for the authorities, on the one hand, of protecting the operation of the payments system from the opportunistic behavior of bank and other financial intermediary owners and managers and from the negative externalities that imprudent behavior can cause and, on the other hand, of avoiding the high fiscal losses resulting from the bail out and protection of depositors, when financial intermediaries become insolvent (Chaves and Gonzalez-Vega, 1994).

3.4. The microfinance revolution: promise and weaknesses

An additional source of hope have been the significant gains in outreach and sustainability attained by a growing number of **microfinance organizations** (MFOs) in making financial services available to poor firm-households (Yaron, 1994; Christen *et al*., 1995). Not curbed by repressive regulation, various types of non-bank institutions, including non-government organizations (NGOs), networks of credit unions, and village banks, have successfully experimented with new lending technologies and have been able to overcome many of the intrinsic obstacles to financial transactions. A few financial intermediaries, such as the *unit desa* system of the Bank Rakyat Indonesia and several clusters of credit unions in some parts of the world have also innovated and introduced deposit services in this market segment, but progress in this area has not been as widespread (Branch and Klaehn, 2002)..

Equipped with new production functions, these non-bank organizations have been reaching increasing numbers of clients. The success of these MFOs and credit unions has been justly celebrated, from La Paz to San Salvador, from Jakarta to Nairobi, and a growing number of places, because the frontier of finance is being expanded in ways that only a decade ago or so were widely believed to be impossible (Gonzalez-Vega, 1996; Gonzalez-Vega, Schreiner, Meyer, Rodriguez-Meza and Navajas, 1997).

So far, the examples of **sustainable** success are conspicuous but comparatively few. Important lessons can be learned, nevertheless, from these microfinance and credit union programs. These experiences confirm that a more hospitable policy environment and –particularly– appropriate innovations in financial technologies and improvements in the institutional design of financial organizations can allow important strides in expanding the supply of formal financial services to broader sectors of the population in developing countries (Chaves and Gonzalez-Vega, 1996).

The secret of the success of these MFOs and credit unions has been that they have directly addressed the basic nature of the problem: they have learned how to overcome the information, incentives, and contract enforcement difficulties that constrain financial deepening and, in doing so, have they have reduced transactions costs for all market participants (Navajas, Conning and Gonzalez-Vega, 1999).

These non-bank organizations have joined non-financial firms (*e.g.*, crop intermediaries) that also reap benefits from information and contract enforcement advantages in their efforts to reach large clienteles with credit and other financial services (Ladman, de la Viña, and Liz, 1992; Alvarado and Ugaz, 1998; Trivelli, Alvarado and Galarza, 1999; Wenner, Alvarado and Galarza, 2002). Important lessons can be learned from these experiences as well.

Innovations in financial **technologies** are at the roots of this success. Many of the MFOs responsible for these innovations suffer, however, from severe deficiencies in their institutional design (structures of property rights and governance), which threaten their sustainability (Gonzalez-Vega, 1998c). Moreover, while technological change appears to be critical for rural financial deepening, failures in the market for new knowledge slow down innovation and the adoption of new practices. The costs of experimentation are high, while it is difficult to protect financial innovations from imitation by competitors. This reduces the profitability needed to cover research and development costs and to spur experimentation in the first place. As a result, the pace of development and adoption of the new financial technologies may be slower than is socially desirable.

Furthermore, inputs needed in the implementation of the new lending technologies, particularly human resources, are also in scarce supply, and major investments in sector-specific **human capital** formation are required. Private investment in human capital formation is discouraged, however, when another MFO, which has not paid for the costs of training, can attract trained employees from the innovative organization. Thus, potential failures in the market for financial innovations and in the market for human capital formation may require government interventions to address these problems directly. This is not an easy task and the policy tools required will be very different, nevertheless, from the earlier subsidized and targeted lines of credit.

Moreover, these positive expectations must be tempered after the observation that typically MFOs do not lend for agriculture (Gonzalez-Vega, 2002a). While the fungibility of funds within rural households clearly allows loans from these MFOs to ultimately facilitate agricultural production, the reluctance of most MFOs to directly lend for agricultural purposes reflects the special difficulties of agricultural finance. Only a few MFOs have been successful in managing portfolios of agricultural loans (Navajas and Gonzalez-Vega, 1999; Rodriguez-Meza and Gonzalez-Vega, 2003). As discussed below, this has required the emergence of robust financial organizations willing to operate in this market segment and the development of financial products appropriate and responsive to the client demands encountered in this segment.

Although contemporary perspectives devote particular attention to the special problems of agricultural credit, these challenges must be addressed within the broader context of rural and financial development. An expansion of the supply of agricultural credit will have a better chance of success if it is embedded in efforts to improve the performance of rural financial markets in general and in efforts to achieve greater market integration and more rapid economic growth in the rural areas (Gonzalez-Vega, 1998b).

IV. New Perspectives on Two Fronts

The adoption of a contemporary vision on rural financial deepening has required a change of perspective on two fronts. On the first front, there is a new perspective on the **role of financial services** in processes of economic growth and rural development. Earlier views considered financial services, in particular credit, as a **policy tool**, for the pursuit of all kinds of –mostly– non-financial objectives. Targeted and supervised agricultural credit programs were created to promote increases in the output of particular crops, food security, the adoption of new technologies, or the redistribution of rural income. While, in this role, financial services had limited effects on the proposed non-financial goals, little financial intermediation occurred and the sustainability of rural financial organizations was undermined in these attempts (Adams, Graham, and Von Pischke, 1984).

In contrast, the new perspective considers financial services as **intermediate inputs**, valuable in processes of market enlargement and integration, as building blocks in efforts to increase the productivity of available factors of production and as tools in efforts to improve intertemporal resource allocations and the management of risk. From this perspective, financial services are valuable ***per se***, in their own right, because they perform functions essential for more efficient production and stable consumption at the farm-household level and for lower transaction costs in market interactions. A more efficient production of financial services generates both private benefits –greater welfare through higher productivity and less vulnerability to shocks– and social benefits –public goods and externalities in the accumulation of information capital, an increased role of contracts, and better risk pooling. Because negative externalities can also emerge when financial markets perform poorly, an appropriate prudential regulation and supervision framework is required to minimize this threat.

From this perspective, the financial sector is viewed as just another **productive** sector, with its own firms, production functions, outputs, prices and markets (Shaw, 1973). This new perspective requires a reformulation of the challenge for governments and donors. The question is no longer how to **control** or redirect the supply of financial services, in order to pursue specific non-financial objectives. Rather, the relevant question is how to promote an **outward shift** of the supply, in order to improve the delivery of financial services as intermediate inputs. That is, the central question is how to further expand the frontier of financial services, generally and in particular dimensions (*e.g.*, the rural areas).

As in any other productive sector, a more rapidly growing supply of rural financial services will result from efforts to reduce the costs of production of these services, to widen the variety (range) of the services provided, to increase the quality of these services and therefore augment their value to the clients, to extend the duration of service provision, and to enlarge the outreach of these services, in order to encompass larger segments of the population (Schreiner, 1998). Because the frontier does not shift outwards at a uniform pace, the specific purpose is to create conditions that promote an expansion of the frontier in its rural dimensions.

On the second front, there is a new perspective on the **role of the state** in the promotion of rural financial deepening. First, in contrast with past approaches, the new vision rejects state intervention in the determination of interest rates and of other prices of financial services.

Second, the new vision also rejects portfolio quotas and other quantitative instruments to redirect the supply and to administratively influence the allocation of credit. Historical experience has taught that the costs from these interventions have been greater than their potential benefits.

Government failure has dominated attempts to correct for market failure in countries with weak institutional infrastructures. This experience has suggested that it is better to work with the market, not against the market (Von Pischke, 1991). In contemporary terms, this simple lesson merely seeks to inject **compatible incentives** into the regulation and operation of rural financial markets.[6]

Third, the new vision also discourages **direct production** by the state of rural financial services (Bourne and Graham, 1984). State-owned credit organizations do not possess information advantages, over their private competitors, about the potential borrowers, and most likely they are at a disadvantage with respect to contract enforcement. There are several reasons for this weakness in financial contract design and enforcement by the state:

(a) The **credibility** of any threats of losses from arrears and default (*e.g.*, foreclosure on collateral) is not strong when the lender is a government agency. A land reform institute that has only recently redistributed land can hardly threaten peasants with taking the land away from delinquent borrowers.

(b) **Bureaucratic incentives** for diligent screening, monitoring and contract enforcement by loan officers are weaker in state-owned agencies, particularly in those countries where civil service legislation does not allow differentiated remunerations, based on performance, and where public sector labor unions make it impossible to hire and fire employees based on their qualifications and productivity.

(c) Expectations of **moratoria** and mandated loan restructuring weaken incentives to repay and a culture of loan repayment where state-owned banks operate. This behavior hurts not only the loan recovery performance of these banks but also the quality of the portfolio of other financial intermediaries that operate in the same environment (indeed, this is a negative externality).

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[6] ***Compatible incentives*** are created when the structure of incentives makes it in the decision-makers interest to proceed according to desired objectives (in this case, the goals of the authorities) rather than coercing decision-makers into behaving against their own interests, in order to achieve the desired outcomes. This compatibility of incentives usually reduces monitoring and enforcement costs and other problems associated with principal-agent situations.

(d) Portfolio allocations are more **vulnerable** to political pressures and to the use of lending criteria not based on considerations of creditworthiness. These pressures not only lead to inefficient credit allocations but also introduce signals that weaken a discipline of loan repayment. The clients of state-owned banks often wonder about the true nature of the transaction; is it a disguised political compensation or is it really a loan contract?

(e) State-owned banks that receive large fiscal transfers or cheap donor funds have frequently had fewer incentives for local deposit mobilization. When they operate with artificially cheap funds, they undermine the efforts of other intermediaries willing to mobilize savings.

These considerations suggest that there are few reasons to believe that state-owned rural organizations have a comparative advantage in the production of financial services. Where they operate, most likely they crowd out other instances of more sustainable expansion of the supply of rural financial services. In some countries, nevertheless, existing state-owned agencies have been transformed into successful financial organizations. The most prominent example is the development of the Unit Desa component of the Bank Rakyat Indonesia (BRI). The parallel operation of other typical state-owned bank activities has suggested that, even in the case of the BRI, threats to sustainability are still important.

More recent experiences have been the privatization of the Bank of Mongolia and the transformation of the Agricultural Development Bank of Guatemala (Alfaro, 2002). These experiences are interesting enough for consideration but they are also too recent to shed sufficient light on the debate. The decision to transform an existing bank that will not go away is, in any case, a second-best option. There is a need to evaluate the trade-off that contrasts advantages from using an existing infrastructure against the threats of crowding out more promising initiatives (Gonzalez-Vega and Graham, 1995).

Special circumstances, which cannot be easily replicated in most developing countries, have surrounded these successful transformations. Moreover, in those countries where the political costs of closing state-owned organizations have already been incurred, there is little to be gained from recreating these agencies. Given their earlier experience, it is therefore surprising to find numerous calls for or the actual reincarnation of these banks in countries where they had already disappeared (*e.g.*, Peru). This may reflect the need to more actively promote alternative interventions as well as to explicitly recognize the strength of the vested interests that seek rents anew with the revival of these organizations.

State action is indispensable, nevertheless, for the promotion of rural financial deepening. Indeed, a contemporary perspective recognizes a critical role for the state in the development of the necessary scaffolding for the promotion and support of rural financial markets.

Given the nature and magnitude of obstacles and constraints to the emergence of rural financial transactions, where this role of the state is not properly performed, rural financial markets remain incomplete, fragmented, inefficient and shallow (Stiglitz, 1993). The purpose of these state actions should be to promote the smooth and efficient operation of **markets**, not to substitute administrative allocations for market forces.

Spontaneous rural financial deepening does not proceed at the socially desired speed. Many market transactions are missing because the environment is not conducive to their emergence or because the require infrastructure is not available (Gonzalez-Vega, 1999a). Development of a more complete **physical and institutional infrastructure** is needed for the emergence and operation of formal rural financial markets. As most of this infrastructure consists of public goods, the central role of the state is to provide these goods. This type of state action is very different from the interventions that characterized earlier strategies of subsidized agricultural credit.

State action in the development of this infrastructure is more important, the more distant the parties in the transaction (*e.g.*, due to geographical or cultural separation), the longer the separation of the obligations of the parties over time (*e.g.*, long-term loans), and the greater the uncertainty about the outcomes of the actions of the contracting parties or the greater the influence of exogenous factors on those outcomes. In the absence of the institutional infrastructure that only the state can offer, transactions are restricted to personalized, direct, and immediate exchanges (North, 1992).

The contemporary perspective on rural financial deepening has gradually emerged in the past few decades. During the 1950-85 period, a **protectionist-repressive** policy environment prevailed. The goal was to modify market outcomes in the pursuit of non-financial objectives. Some of these objectives were fiscal: revenue generation and the allocation of subsidies. Some of these objectives had a planning dimension: to influence resource allocations away from market outcomes. In practice, most of the motivations had their roots in **rent seeking**, while competition was severely reduced. The strategy attempted to work against the market and against the financial nature of the transactions.

Policies of **financial liberalization** have been gradually introduced since the mid-1980s. Building on a more favorable macroeconomic environment, given the success of stabilization measures, these policies have attempted to improve efficiency in the operation of financial markets and to take advantage of the gains from transactions that take place through markets and on market terms. To the extent to which these policies have allowed the emergence of more sustainable practices in the pricing of financial services and the development of comparative advantages by a broader set of organizational forms (bank and non-bank intermediaries, credit unions and non-government organizations), these policies have created a more favorable environment for rural financial deepening.

Financial liberalization has been accompanied, in most countries, by deep reforms in the framework for **prudential** regulation and supervision. This new framework has reduced opportunistic behavior by particular financial intermediaries, but it has not been sufficient to protect many of these organizations from systemic risk associated with macroeconomic shocks (Gonzalez-Vega, 2001b). In this sense, the regulatory framework is incomplete. To the extent to which these adverse shocks reflect poor macroeconomic management, improvements in stabilization policies will be critical.

To the extent to which liberalization is a necessary but not a sufficient condition for a rapid expansion of the supply of rural financial services, moreover, this has been an incomplete strategy. The new perspective has increasingly insisted on the adoption of **promotion** policies through the development of the physical and institutional infrastructure needed to support market operations. Specific government actions for this purpose are discussed below.

V. Closing three gaps

The successful acceleration of the process of rural financial deepening will require the closing of three different gaps (Gonzalez-Vega, 2001a). The presence and magnitude of these gaps explains specific ways in which the current supply of rural financial services is insufficient. The distinction matters, because closing each one of these gaps will require different types of actions and interventions.

The first one is the **inefficiency gap**. This gap separates, on the one hand, current achievements –the current state of rural financial deepening– and, on the other hand, potential supply. **Potential supply** is the amount (volume, number, type) of financial services that could be provided, given current factor endowments, institutional infrastructure, and financial technologies. To close this gap, it will be necessary to change policies and to introduce compatible incentives that would allow increases in efficiency, to promote a movement from the current rural financial deepening situation towards the frontier of what is potentially feasible.

The second one is the **insufficiency gap**. This gap separates, on the one hand, potential supply and, on the other hand, **legitimate demand** for rural financial services. The obstacles and constraints discussed earlier, related to imperfect and asymmetric information, incompatible incentives, and missing mechanisms for contract enforcement, explain this gap, given a potential supply that is almost inevitably insufficient to satisfy all legitimate demand. In the case of credit, for example, legitimate demand results from the existence of **actual** ability and willingness to repay a loan, according to the terms and conditions of the contract, but which is not always correctly assessed or cannot be costlessly recognized by existing lenders. Thus, the required supply does not emerge to clear the market. To close this gap will require additional innovations in financial technologies, the accumulation of various types of specific capital –particularly specialized human and information capital– as well as further development of the physical and institutional infrastructure needed for a more efficient and smooth operation of rural financial markets.

The third one is the **feasibility gap**. This gap separates, on the one hand, legitimate demand and, on the other hand, unrealistic political expectations or promises. This gap results from a poor distinction between what is feasible and what is not feasible as well as between what is desirable and what may not be desirable in the promotion of rural financial deepening. The gap results from political pledges of outcomes that are not achievable. To close this gap it is necessary to incorporate, into the design and implementation of programs and projects, contemporary views about the proper role of financial services and about the difficulties and costs encountered in their provision. Beyond the proper design of rural financial market interventions, there is a need to promote a robust climate of public opinion and political acceptance of the new perspectives and to create the institutional capacity require for their implementation.

The nature of each one of these gaps and the actions and interventions needed to close them are discussed next.

5.1 Inefficiency gap

The inefficiency gap separates current achievements in rural financial deepening from the potential supply. Current achievements differ from potential supply because all available resources for the production of various types of financial services are not being used efficiently (Gonzalez-Vega, 2001).

Any country has a potential supply of various types of financial services. This potential supply reflects the country's endowment of various factors of production (*e.g.*, physical and human capital), its institutional infrastructure (*e.g.*, a framework for property rights and contract enforcement), and its knowledge about financial technologies and potential clients (*e.g.*, information capital). Available resources (*e.g.*, loan officers) can be allocated to the production of one or another type of financial service (*e.g.*, urban or rural credit). When the limits that define the frontier are finally reached, greater production of one type of financial service (using available funds, loan officers, and managerial systems) would require less production of another financial service.

At any point in time, therefore, potential supply can be represented by a **frontier of production possibilities** of financial services (PPF).[7] The PPF separates those combinations in the production of two types of financial services –loan amounts, numbers and types of clients and transactions, the terms and conditions of financial contracts, the variety, quality and sustainability of services, and the delivery of those services to different market segments– that are **feasible** –given the available endowments of specialized human and information capital, managerial abilities, physical inputs, knowledge, networks, and funds as well as the existing financial technologies and institutional arrangements– from those that are **not feasible**, given current limitations in factor endowments and knowledge. Only additional resources, new institutional arrangements, and innovations in financial technologies would shift the frontier outwards.

For simplicity, the frontier shown in Graph 1 represents potential combinations in the production of two types of financial services –urban and rural. Amounts of urban financial services are shown on the vertical axis and amounts of rural financial services are shown on the horizontal axis. Combinations "a" and "b" of these two types of services are feasible, while combination "c" is not feasible, under current circumstances. Moreover, combination "b", which is right on the frontier, indicates the achievement of **technical efficiency**. Given this combination, it is no longer possible to produce more rural financial services without reducing the amount of urban financial services produced. Below the frontier, it would still be possible to produce more of both types of services.

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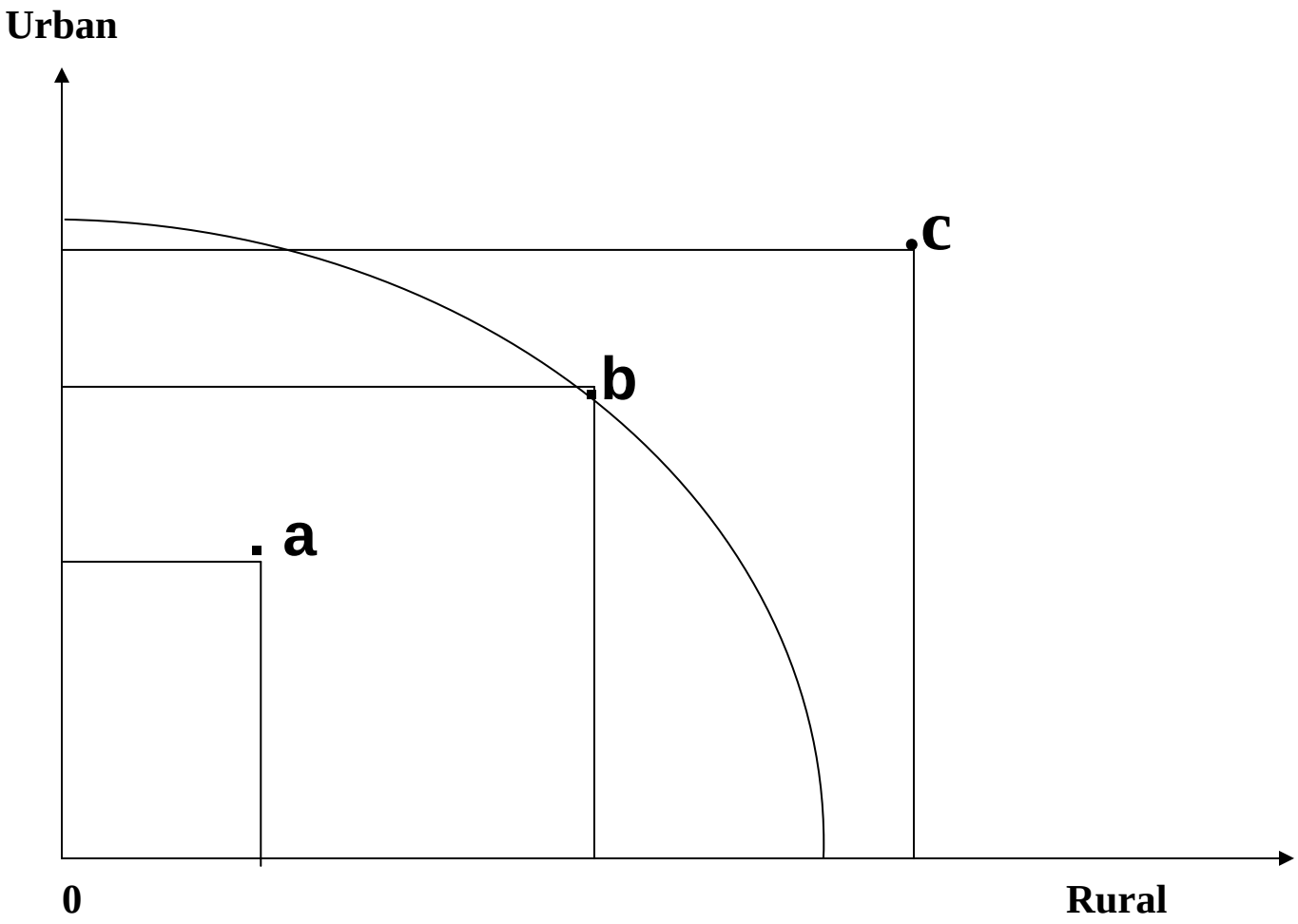
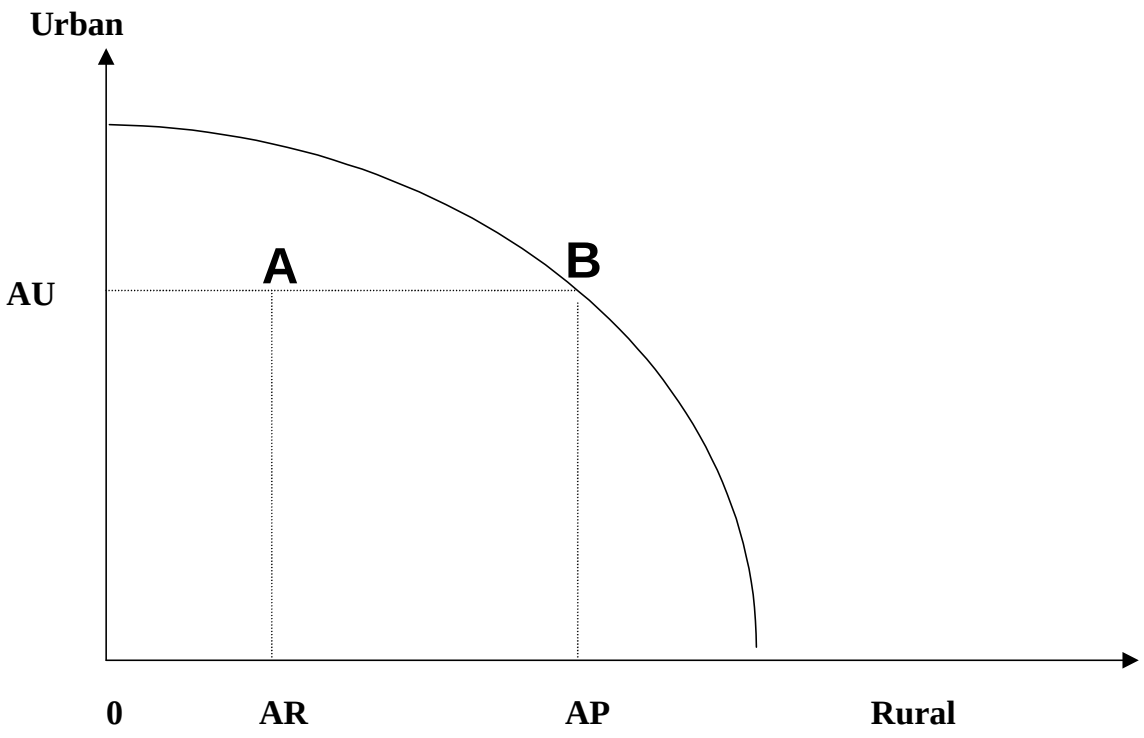
[7] Von Pischke (1991) introduced the concept of a ***frontier*** in the production of financial services. This concept is adapted here into a graphical representation inspired by a transformation curve. Given the whole range of financial services that can be produced, however, there is a ***production possibilities set*** that contains all possible combinations of those services. This range of services is reduced to two types of services here (urban and rural) in order to allow a two-dimensional graph.



Graph 1: Production Possibilities Frontier for Financial Services

The existence of an inefficiency gap is represented by a current combination of urban and rural financial services produced at a point such as "a", which is below –inside– the frontier in Graph 1, or by a point such as "A", inside the frontier, in Graph 2. At point "A", an amount *AU* of urban financial services and an amount *AR* of rural financial services are being currently produced. The distance between the current situation at "A" and a combination at the frontier, at a point such as "B", measured here as the horizontal distance between *AR* and *AP*, represents the inefficiency gap in the provision of rural financial services, keeping the amount of urban financial services –*AU*– constant.[8] With the available resources and technologies, rural financial markets could offer better outreach and sustainability outcomes than is currently the case. Because there is no technical efficiency and more financial services could be produced, there are leakages and wasteful uses of current resources.

[8] Given its preferences and other criteria, a country can chose any combination of financial services along the frontier, such as the combination represented by the point "B". For the purposes of the present analysis, the amount of urban financial services produced –*AU*– will be kept constant, in order to highlight changes in the production of **rural** financial services.



Graph 2: Inefficiency Gap

In order to close this inefficiency gap, it would be necessary to increase technical efficiency. There are several sources of this inefficiency. First, the lack of efficiency and the resulting waste may reflect distorted resource uses in rural financial markets as a consequence of incorrect government **policies**, such as those adopted during the protectionist-repression period. Second, inefficiency and waste may reflect the channeling of public resources and funds through weak and unsustainable rural financial **organizations**, which cannot productively use them. Third, inefficiency and waste may frequently reflect the absence of appropriate structures of **incentives** within rural financial organizations. These incentives are needed to induce decision-makers to seek efficiency.

Policies matter for efficiency. To close the gap, repressive and distorting financial policies must be abandoned. Further, the framework of **prudential** regulation and supervision influences the types of financial organizations that are authorized to operate. Different types of organizations have different inclinations and abilities for the achievement of technical efficiency. Moreover, in order to encourage the development of robust and efficient organizations, international agencies and donors must channel their funds through organizations that seek efficiency and sustainability. This is not a trivial task, given the strong and distorting **political economy** forces that shape the flows of government and external funds for rural financial organizations.

These political economy motivations and influences do not always coincide with rural financial deepening objectives (Gonzalez-Vega, 2002b). Wasteful uses of available resources and the inefficiency that characterizes operation inside the frontier is the price –**opportunity cost**– that is paid because of the pursuit of non-financial goals and because of the support of unsustainable organizations by governments and donors, at the expense of technical efficiency. Frequently, this behavior is too costly for society, because a larger supply of rural financial services could be achieved with the current endowment of resources and with the levels of support offered by these public sector agencies. When the induced inefficiency reflects political inclinations of particular foreign donors, the actual outcomes may not necessarily reflect priorities according to the developing country's needs and preferences.

Unfortunately, the costs of this political economy behavior are not limited to the wasteful use of government and international donor funds. By allowing weak organizations to compete in the same market segments as other intermediaries, without **hard budget constraints** or without the discipline of operating on market terms, this –unfair– behavior crowds out the operations of other, potentially more sustainable, rural financial intermediaries. This outcome is equivalent to a negative **externality**, because those donors and governments that are willing to waste their own resources in unsustainable projects, in the pursuit of their own political objectives, do not have to pay for all of the costs of their choices. As a result, there will be an excess of weak, not sustainable organizations, and a shortage of robust, sustainable rural financial organizations.

This behavior of governments and donors and the resulting negative externalities further discourage any **investments** in the research and development of new financial technologies that would expand the supply of services in these particular market segments. Given the distorted loan contract terms and conditions that they promote, these interventions will make it impossible for those willing and capable of investing in technological change to reap the returns from their efforts. Insufficient attention to sustainability thus retards innovation.

This behavior also discourages demands for the development of the physical and institutional infrastructure needed for rural financial deepening. The beneficiary organizations do not need this infrastructure in order to reduce their costs, because they can temporarily survive with the subsidies from governments and donors.

This behavior further contributes to the destruction of **social capital** –shared social norms that facilitate transactions– as these government and donor programs weaken the culture of repayment and send signals about loans as political handouts rather than as financial contracts. The resulting **demonstration effects** erode attitudes and perceptions about the importance of fulfilling contract obligations, beyond the specific market segments. This makes their signaling efforts more costly for organizations willing to operate in these segments in the future.

Reaching the frontier of the country's potential supply also requires that, in making decisions and in performing their tasks, the suppliers of rural financial services face incentives that are **compatible** with efficiency and sustainability. Ultimately, the performance of rural financial organizations depends on the decisions of their owners, managers, staff, clients and regulators. Given the particular objective function of each one of these stakeholders, their actions will respond to the existing structure of **incentives**, and these actions will in turn determine the performance of the organization. Reaching the frontier requires structures of incentives compatible with technical efficiency.

Usually, the relevant structure of incentives emerges from the structure of property rights and governance mechanisms of the organization, the mission that it is expected to pursue, and the constraints resulting from the regulatory framework within which it operates. The structure of **property rights** determines who has decision-making powers in the organization and who are the residual claimants from those decisions. The **mission** implies predetermined criteria that guide the collective choices of those involved in the organization. **Governance** mechanisms define the procedures for decision-making. The **regulatory framework** creates constraints on those decisions and on their implementation.

Many deficiencies in the property rights, governance, and regulatory framework within which rural financial organizations operate explain the large current inefficiency gaps. The absence of clearly defined owners and other attenuations of property rights usually lead to technical inefficiency. Most organizational structures of rural financial intermediaries (state-owned banks, credit cooperatives, and non-government organizations) are characterized by attenuated property rights and do not generate optimal levels of **internal control**, which would guarantee the search for technical efficiency and sustainability. There are a few exceptions, of course, but these typically reflect the influence of unusual and highly committed individuals, not any strengths of institutional design.

Indeed, NGOs do not have investors who stand to lose their money as a consequence of their inefficiency. The lack of true equity capital usually prevents NGOs from mobilizing deposits. Within certain limits, however, depositors could add to the monitoring of a financial organization's performance. The presumed owners of state-owned banks –the people– hardly possess any instruments to monitor the behavior of bureaucratic managers and unionized employees, who frequently are more interested in the level of their own remunerations and privileges than in the organization's technical efficiency. In the case of credit unions and village banks, members jointly own their equity. The diverging interests of borrowers and depositors can create conflicts, particularly when the one-person, one-vote rule is used as the main governance mechanism. When borrowers are the dominant force, decisions favor their short-term interests and discourage the mobilization of savings, which in the long run works against the interests of all parties, and threaten the sustainability of the organization (Chaves and Gonzalez-Vega, 1994).

Ambiguous and frequently contradictory definitions of the **mission** of rural financial organizations make the search for technical efficiency even more difficult. Structures of incentives that do not include penalties and rewards related to efficiency will fall short of the desired outcome. Those organizations that have been able to develop **performance-based remunerations** have indeed shown greater technical efficiency (Rodriguez-Meza and Gonzalez-Vega, 2003; Rodriguez-Meza, Gonzalez-Vega and Gonzalez-Gonzalez, 2003).

Overcoming these various shortcomings in organizational design is one of the most important and difficult tasks in the process of rural financial deepening (Von Pischke, 2003). This task will require substantial **institution building** efforts (Krahnen and Schmidt, 1994; Schmidt and Zeitinger, 1998). Institution building is needed at the level of particular rural financial organizations, at the level of the agencies, such as credit bureaus, that are part of the institutional infrastructure needed for a more efficient operation of markets, and at the level of the prudential regulation and supervision authorities. Important trade-offs emerge in the choice of support of the upgrading of existing organizations, in order to correct for their shortcomings, or of the creation of entirely new organizations, whose institutional design would circumvent the existing deficiencies (Zeitinger and Schmidt, 2000). It seems that the choice will depend on specific initial conditions in each country and the abilities of the agency that provides institution-building support.

The design of the prudential regulation and supervision framework is also critical in this context, to the extent to which this framework determines the types of organizations that are allowed to operate in various segments of the market (Christen and Rosenberg, 2000). Reducing the inefficiency gap will require a regulatory framework that encourages robust organizations, with a vocation for efficiency and sustainability in addition to their inclination to operate in the desired market segment. Creating regulatory incentives for this outcome without destroying competition and erecting barriers to entry that discourage innovation requires a delicate balance.

Regulatory asymmetries contribute to technical inefficiency. Regulation should attempt to establish a competitive environment for all types of financial organizations. Playing fields that are not level do not allow comparative advantages across organizations to be revealed. At the same time, the regulatory framework should be flexible enough to allow the regulation of different intermediaries –because of the different types of risks that they take– in different manners. Moreover, rules and regulations that ignore the true nature of financial intermediation may also create unnecessary obstacles to an expansion of the frontier in innovative dimensions. The supervision of rural financial organizations should not be used to enforce non-financial requirements or pursue non-financial objectives that do not respond to the purposes of prudential regulation.

5.2 Insufficiency gap

The insufficiency gap separates the potential supply of rural financial services from legitimate demand. Legitimate demand reflects the willingness and ability of the rural population to demand different types of financial services at the prices and terms and conditions at which they are offered or could be offered under competitive conditions.

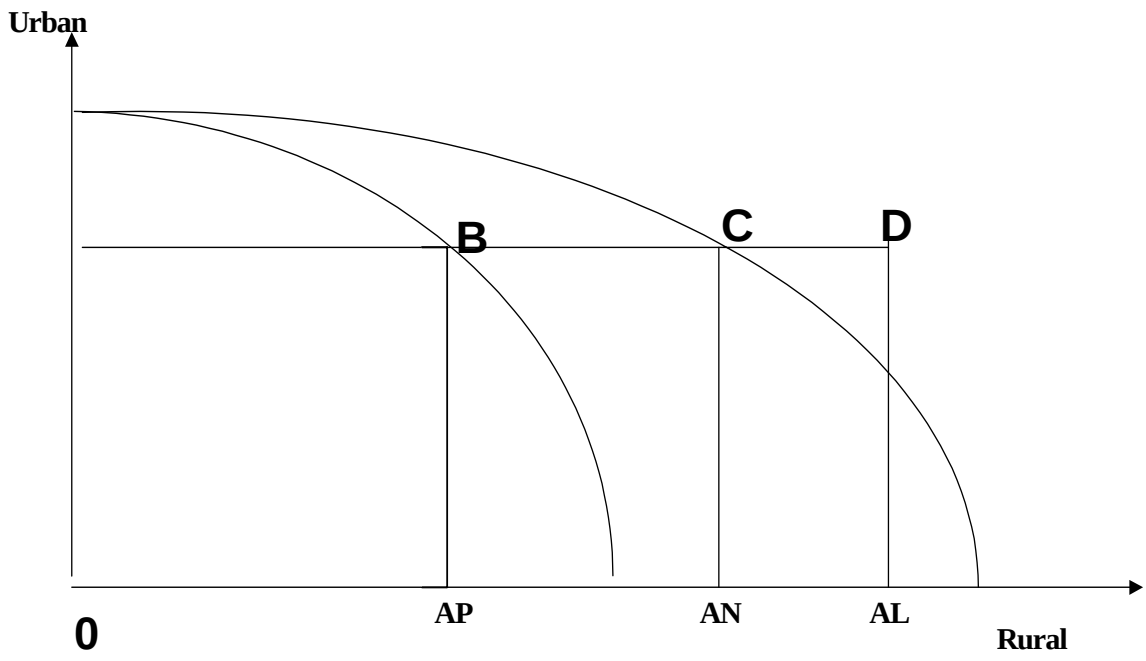
An application to take a loan is not sufficient evidence of demand. In a loan, an amount of current purchasing power that is certain is exchanged for an uncertain promise to repay in the future. Many people would "demand" loans that they do not plan to repay or that they do not expect that will be collected. This would be a spurious demand. This possibility creates the need to define ***legitimate demand*** as the existence of a ***true willingness and ability to repay*** the loan, given the terms and conditions included in the "price" vector of the transaction.

Moreover, legitimate demand should reflect willingness and ability to repay loans produced at costs that incorporate technical efficiency, given current endowments and knowledge. Practices that generate technical inefficiency do result in high "prices" for financial services, which discourage actual demand. Legitimate demand should be defined for efficient, competitive prices and, given current inefficiencies, it will be greater than existing demand. Furthermore, as the ability to produce financial services in a more cost-effective manner improves, the prices of financial services should drop and legitimate demand will increase.

The interrelated obstacles and breakdowns that impede rural financial transactions, examined in section 3.2, make potential supply insufficient in meeting this legitimate demand. This insufficiency gap represents the extent to which there are unsatisfied clients –that is, **excess demands**– at prices for those services that correctly reflect their opportunity costs, even if all available resources and knowledge are used with technical efficiency.

In any case, these excess demands could not be eliminated through increases in interest rates, in view of possibilities for **adverse selection** and **moral hazard** that increase the risk profiles of loan portfolios when interest rates rise. Given these threats of increased risk, credit **rationing** typically takes place, excess demands are not removed, and the market for credit does not clear (Keeton, 1979; Stiglitz and Weiss, 1981). The insufficiency gap can only be reduced through outward shifts of the PPF.

Broad segments of the rural population of developing countries have the ability and willingness to repay loans at market interest rates, which would in turn cover the costs of efficient and sustainable financial intermediaries, and would be willing to pay reasonable fees for funds transfers and remittances or to deposit their savings, if a moderate interest rate is offered on convenient and safe deposit facilities but, as a result of this insufficiency gap, they are not able to gain access to these services.



Graph 3: Insufficiency Gap

Graph 3 shows the extent of the insufficiency gap, even after a shift of the frontier that is biased towards closing the rural crevice that has characterized financial development. For a level of production of urban financial services that has been taken as given (*AU*) and with the available resources, institutions, and knowledge, the original frontier shows a maximum amount of rural financial services (*AP*) that can be produced (at point "B"). At this point, the insufficiency gap is represented by the distance (*AL – AP*) between this supply and legitimate demand, measured as *AL* at a point such as "D".

After an outward shift of the frontier, for the same level of urban financial services, the new frontier shows a maximum amount of rural financial services of *AN* (at point "C"). That is, with this shift, the potential supply of rural financial services has increased by the distance between *AP* and *AN*. This shift, however, would reduce but it would not eliminate the insufficiency gap, which will be now represented by the distance between *AN* and *AL*.

In Graph 3, the legitimate demand for rural financial services is *AL* (at point "D"). This legitimate demand will further increase with growth in the clients' productive opportunities, which will augment their ability and willingness to repay loans and to deposit their savings, and with reductions in the transaction costs and risks that they face. Given the importance of **fixed costs** in the supply of rural financial services, an increase in effective demand may actually also increase supply, as opportunities to exploit economies of scale and economies of scope will then emerge and unit costs will decline.

The insufficiency gap is closed when there are outward shifts of the frontier. Three different processes can cause a biased expansion of the frontier that favors rural financial deepening:

(a) **innovations** in financial technologies that overcome typical obstacles to rural financial transactions and the design of new financial products that respond to the characteristics of rural household-firms,
(b) development of the physical and institutional **infrastructure** that facilitates adoption of the new financial technologies, and
(c) **human capital** formation that facilitates adoption and implementation of the new technologies.

These are the most basic ingredients in a process of rural financial deepening. Their emergence is closely interconnected. Deficiencies in one of these dimensions may retard progress in another dimension. Advancement in each dimension reinforces achievements in other dimensions. Specific dimensions of progress are discussed in Section VI.

Only when these fundamental determinants of shifts of the PPF have been promoted, are rural financial markets in the position to mobilize and absorb additional loanable **funds**. The opportunities resulting from these outward shifts will likely attract the required funds, mostly through additional deposit mobilization and access to other market sources of funds. Government and donor funds should then be mostly used to reward compatible behavior and encourage financial product dimensions not offered through market sources, without distorting market incentives.

Historical experience shows that premature and massive injections of government and donor funds, before the innovations, institutions, and infrastructure are in place, have counterproductive effects and actually discourage outward shifts of the frontier. The flood of funds usually distorts the structures of compatible incentives needed to reform policies and transform organizations. In the absence of conditions that would guarantee an efficient use of the additional funds, waste would be introduced in the system. Furthermore, easy access to government and donor funds discourages local deposit mobilization or the search for commercial sources of funds. When they operate with non-market funds, organizations have less incentives to economize and to protect the real value of their portfolios, while borrowers may feel that it is less urgent that they repay loans and loan officers may feel that it is less urgent to collect them (Aguilera-Alfred and Gonzalez-Vega, 1993).

5.3 Feasibility gap

The feasibility gap separates a legitimate demand for rural financial services from political promises and **expectations** about portfolio levels, dimensions of outreach, and loan prices. Frequently, this gap reflects lack of recognition of the feasible rhythm of expansion of the FFP. To promise what is not feasible usually has counterproductive effects.

Not all rural firm-households possess legitimate demands for financial services. Usually, demands for payments services and deposit facilities are quite widespread. Legitimate demands for credit are not as broadly based, given the debt service burdens that accompany loans. Not all rural households are creditworthy and not all households want to acquire liabilities. If this is the case, the political promise of "credit for everyone" is both unrealistic and meaningless.

Being in debt should not be announced as a "human right" either. When borrowers do not have the ability to repay, enforcement of loan contracts will require foreclosure. The loss of assets will impoverish them. When the lack of repayment capacity reflects the absence of productive opportunities, loans cannot increase income flows.

The feasibility gap can only be closed with political maturity and fiscal responsibility. Rural financial market interventions should assess what is feasible. **Cost-benefit** analysis should be used to determine when an expansion of the supply of rural financial services is socially desirable. After all, the opportunity cost of resources spent in promoting rural financial deepening are the education, health, nutrition, and other public services that could have been funded otherwise. Given a political decision to promote an expansion of the frontier in a particular dimension, optimum intervention rules must be followed in the choice and implementation of the strategy (Gonzalez-Vega, 1993 and 1994).

Existing circumstances in political arenas should not be ignored. In the design of the interventions, it is important to identify winners and losers and to evaluate the political feasibility of the recommendations. To increase the acceptance of policies more conducive to rural financial development, time and resources should be spent in educating the public, at large, and critical constituencies, such as the media, religious leaders, academics and other influential voices, in particular. Sound analysis and persuasive arguments must be used to diffuse objections raised by vested interest groups. A visible and credible champion is critical in policy reform efforts.

VI. Policies for rural financial deepening

A contemporary perspective acknowledges the urgency to adopt new policies, develop the necessary physical and institutional infrastructure, improve and disseminate new financial technologies, and design and build new organizations, which would allow a more efficient, sustainable, and broadly-based provision of rural financial services in the developing world and economies in transition (Gonzalez-Vega, 1993).

Policies refer to public actions –government and donor interventions– needed to create an environment conducive to rural financial market development (Cuevas, 1996; Gonzalez-Vega, 1998b). Key policy interventions may require revisions of legal systems (*e.g.*, property rights, borrower and lender rights, contract design, judicial enforcement), new financial policies (*e.g.*, interest rates, exchange rates, reserve requirements), and new regulatory frameworks (*e.g.*, entry and exit of financial organizations, degrees of market competition, prudential regulation and supervision).

These policies, legal systems, and regulatory frameworks are part of the institutional infrastructure needed for the efficient and stable operation of rural financial markets (Burki and Perry, 1999). At best, the development of this infrastructure has been neglected; frequently in the past, interventionist policies actually repressed financial market development.

Reforms of non-financial policies that constrain the profitability of client businesses and public investments and that reduce transaction costs for all market participants also contribute to an expansion of both the demand and the supply of rural financial services. The development of supporting **institutional mechanisms** (*e.g.*, property registries, credit bureaus and rating agencies) is also critical for rural financial market expansion. Because many of these supporting tools may be public goods, state intervention may be needed in order to accelerate their provision.

Getting prices, policies and institutions right is a necessary but not a sufficient condition for rural financial deepening in developing countries and economies in transition. This goal will not be reached unless new, cost-effective lending and deposit-taking **technologies** are developed and implemented, in ways that allow an expansion of the supply of a broad range of financial services, delivered to wide segments of the rural population, at appropriate costs and risks for both the clients and the organizations that offer these services. That is, these costs would allow the clients to undertake projects that generate marginal rates of return at least as high as those being generated elsewhere in the economy and would allow the organizations to deliver those services in a sustainable and profitable manner (Morduch, 1999a and 1999b).

Because of **externalities** in the market for information and, in particular, in the market for innovations, private initiatives may not be sufficient to bring about the desired level of experimentation and adoption. Although state intervention may be needed to promote technological change, the choice of how to accomplish this matters. Resources are scarce and successful loci of innovation are unknown before hand.

Moreover, knowledge of appropriate financial technologies will not be sufficient, either, for the sustainable expansion of rural financial markets (Gonzalez-Vega, Prado Guachalla and Miller Sanabria, 1997). The **organizations** that supply these services must possess the required resources (human capital, leadership, networking, information capital, and access to funds), and they must implement business plans that successfully pursue a mission to serve this market segment in combination with a vocation for sustainability (Gonzalez-Vega, 1998b).

Such organizations are in short supply in the rural areas of developing countries and economies in transition. They are key to the effort, however. Robust and creative organizations will undertake a major part of the innovation required and will be in better position to adopt and adapt knowledge and practices developed elsewhere. In contrast, the right policies and new technologies will be irrelevant, if the organizations that offer rural financial services are inefficient and not sustainable.

Finally, assembling all of these ingredients in a coherent **system** requires that the structure of **incentives** engendered by the ownership structure and governance design of the organization be compatible with its outreach and sustainability objectives. An inconsistent mission and incompatible incentives will be a recipe for failure. Moreover, the legal and regulatory framework within which these organizations operate influences their ownership and governance structures. These structures must also be well-matched with the characteristics of the financial technologies adopted. The construction of this system and the acquisition of the resources needed will require deliberate institution-building efforts, which may be facilitated by government and donor assistance (Schmidt and Zeitinger, 1998).

6.1 Promoting the Expansion of the Demand for Rural Financial Services

Optimum intervention in the promotion of rural financial deepening calls for a precise **diagnosis**, namely the identification of actually-binding constraints to rural financial transactions (*what are the nature and extent of the problem?*). Optimum intervention also requires the choice of **policy tools** that effectively overcome those constraints (*what are the best instruments for the intervention?*). Usually, the best instrument is an intervention that directly addresses the specific nature of the problem. The failure of many past interventions may be attributed to violations of this **matching rule** (Gonzalez-Vega, 1990 and 1994).

First, failure reflected a misunderstanding of the true nature of finance, which resulted in attempts to use financial services when finance was not the appropriate instrument to address the problem or achieve the objectives of the authorities (Von Pischke, Adams, and Donald, 1983; Braverman and Guasch, 1986). Despite the best intentions, these interventions turned out to be unexpectedly harmful for the particular segments of the rural population they had ostensibly set out to help (Gonzalez-Vega, 1977 and 1999b; Graham and Cuevas, 1984; Gonzalez-Vega and Gonzalez-Garita, 1987).

Second, the failure of earlier interventions resulted from an incorrect diagnosis of the difficulties encountered in rural financial deepening. Rural financial market shortcomings were attributed to evil exploitation by informal moneylenders or to the indifference of private bankers. The state was then asked to take responsibility for expanding the supply of rural financial services, but the difficulties to be overcome could not be eliminated by decree. The mistake was to attempt a political solution to what is essentially the technical problem of producing financial services in this market segment at sufficiently low costs and risks.

The challenge of promoting rural financial deepening is therefore complex, as the obstacles that must be overcome permeate all dimensions of the market. This section classifies constraints as binding on either the demand side or the supply side of the market. Both dimensions matter for rural financial deepening.

The **demand** for rural financial services is constrained by factors such as:

(a) high **transaction costs** to be incurred by potential borrowers, which increase the total costs of the funds beyond the payment of interest and fees to the lender;

(b) high transaction costs to be incurred by potential depositors, which decrease the net returns on their savings below interest earnings (Guerrero, 1992);

(c) high **risks** faced by potential borrowers, which reduce their willingness to borrow, in fear of encountering problems to service the loans and suffer the loss of assets pledged as collateral, including their reputation;

(d) high risks faced by potential depositors, who are worried not only about the volatility and divergences between expected and actual rates of return on their savings, but mostly about the risk of partial or total loss of the principal of their deposit;

(e) lack of adequate **information** about the availability and terms and conditions of loan and deposit services, which discourages potential clients to seek satisfaction of their demands;

(f) high costs for potential borrowers of persuading lenders, because of asymmetric information, about their true repayment capacity, which lead them not to reveal their demands for credit (Bester, 1985; Sanchez-Schwartz, 1996);

(g) severe information and property rights limitations that prevent potential depositors from monitoring and sufficiently constraining the opportunistic behavior of deposit-taking institutions and thus discourage deposits (Chaves and Gonzalez-Vega, 1994);

(h) idiosyncratic and environmental circumstances that reduce the repayment capacity of rural firm-households and thereby reduce their demands for loans, and

(i) idiosyncratic and environmental circumstances that reduce the ability of rural firm-households to accumulate assets and thereby reduce their demands for deposit facilities (Gonzalez-Vega, 1998b).

Distance is one of the most important determinants of transaction costs. Geography, ethnicity, culture, and social class create distance between borrowers and lenders. Distance hinders communications. Transaction costs are high in rural areas for borrowers and for depositors due to deficiencies of the transportation and communications infrastructure. The reduction of transaction costs needed to increase the demand for financial services critically depends, therefore, on the provision of some of the most basic **public goods** and physical infrastructure: roads, telephones, mail services, literacy, electricity. The provision of these public goods also increases the repayment capacity of potential borrowers, by facilitating access to markets for inputs and for outputs.

In addition to income uncertainty, risks for borrowers and depositors are associated with lack of personal safety (crime), the eroding impact of inflation on deposits, and the fear of bankruptcy of deposit-taking organizations. Basic functions of the state are also involved in the removal of these obstacles to rural financial deepening: the provision of law and order, the promotion of macroeconomic stability, and the development of adequate prudential regulation and supervision frameworks for deposit-taking organizations (van Greuning, Gallardo, and Randhawa, 1999).

The breadth and depth of rural financial markets depend on the existence of a potential clientele of firm-households with (a) sufficient productive opportunities to be able to take loans and be willing to repay the principal plus sufficient interest to cover the costs of the financial organization and with (b) the stable cash flows that allow them to make regular loan repayments. Given the seasonality that characterizes agricultural pursuits, successful rural financial organizations will have to develop new financial products that do not require the frequency of repayment that has been needed to facilitate the monitoring of borrower behavior in urban microfinance (Buchenau, 2003). Rural financial deepening also depends on the capacity of these firm-households to save and on their willingness to keep some of their wealth in the form of financial assets. Liquidity, safety and a reasonable return will be attributes of financial assets demanded in this market segment.

A multitude of factors influence the repayment and savings capacities of the rural population. Of particular importance are the determinants of their opportunities for **income generation**, which in turn depend on their access to:

(a) productive assets. Of special interest is their access to land and its quality (fertility, irrigation, topography, climate, location) and to human capital (education, health, nutrition, experience) and information;

(b) profitable production and marketing technologies;

(c) the inputs needed to implement those technologies, and

(d) the markets where the producer can obtain an attractive reward for her efforts.

Government policies influence the determinants of income potential. **Agrarian policies** establish property rights on land and influence the performance of land markets, affecting decisions about crop selection and investments in land improvements. **Rural education** programs facilitate human capital formation. Agricultural **research and extension** activities influence the pace of technological change. Public investments in **infrastructure** and in public safety increase access to markets.

Equally important are policies that modify **relative prices**. Foreign exchange policies determine the relative price of tradable and non-tradable goods. Trade policies influence the profitability of producing for exports or for import substitution. The structure of **effective protection** alters the terms of trade and the relative profitability of different sectors of economic activity. The structure of taxes and subsidies influences relative prices and public investment influences the profitability of different activities. Price stabilization and price control schemes alter prices as well.

An **urban bias** that depressed rural loan repayment and savings capacities characterized both public investment and most of these policies before the structural adjustment programs of recent decades (Krueger, Schiff, and Valdes, 1992; Valdes, 1996). These reforms have only partially revised, however, the policy environment for rural productive activities. The markets for several crops are still administratively controlled and effective protection is not uniform across products. Macroeconomic stabilization programs not accompanied by an effective reform of the state have constrained fiscal resources for investment in critical public goods needed to improve the productivity of resources in agriculture (Gonzalez-Vega, 1998b). The expansion of rural financial markets will not be vigorous as long as these constraints on the demand side are in place.

Financial policies significantly affect the demand for financial services. The demand for deposit facilities is mostly influenced by perceptions about the risk of illiquidity or insolvency of deposit-taking organizations. An appropriate framework of **prudential** regulation and supervision can modify these perceptions of risk. Under certain conditions, deposit insurance can play a similar role. While it contributes to depositor confidence, deposit insurance encourages free-riding by savers that would otherwise more closely monitor the deposit-taking organization and it may lead to opportunistic behavior (moral hazard) by the owners and managers of the organization (Chaves and Gonzalez-Vega, 1994). Large fiscal losses may result in the case of bank failure.

6.2 Dealing with Risk

Risk is central to the performance of rural financial markets (Von Pischke, 1984). Excessive risk decreases both the demand and the supply of rural financial services. Borrowers need tools to cope with and manage risk, while lenders need tools to identify and constrain the risk of their portfolio.

A key feature of economic behavior in the rural areas of developing countries is the incidence of risk on decisions (Alderman and Paxson, 1992; Morduch, 1995). Relevant risks range from illness (due to undeveloped sanitary infrastructure: potable water, sewer, preventive medicine) to income volatility. Agricultural production, in particular, is inherently risky, as farmers face a multitude of weather, pest, livestock disease, input-supply and market-related risks. These risks discourage borrowers, who worry about their capacity to repay loans, and discourage lenders, who fear unexpected losses from default. Where insurance and other market mechanisms to manage risk are missing, informal institutions emerge (Rosenzweig and Wolpin, 1993; Besley, 1995).

Although gains from informal risk-management institutions are important, these mechanisms have major limitations. Some, such as crop diversification, can be costly in terms of income opportunities forgone from specialization. The absence of formal insurance markets may discourage investment and technological change that increases long-term productivity. More importantly, due to their local nature, informal institutions cannot cope with systemic risk from covariant reductions in income (*e.g.*, drought).

In theory, governments should and could correct for market imperfections that constrain the emergence of insurance markets (Arrow, 1996). As was also argued with respect to financial markets, however, the relevant instances of market failure (adverse selection, moral hazard) do not appear to be amenable to easy correction, while in practice most interventions have been captured by rent seekers (Hazell, Pomareda, and Valdes, 1986).

Indeed, a multitude of government-sponsored **risk-management** programs have been implemented in developing countries, ranging from price stabilization and crop insurance to drought relief. Most of these interventions have proven to be fiscally expensive, and there is little evidence that they have generated any sizeable social benefits (Skees, Hazell, and Miranda, 1999). Crop and natural disaster relief have also had profound regressive redistributional impacts in developing countries. Moreover, for small countries, government assistance can be costly, representing a large share of GDP if the disaster is large, with serious fiscal consequences on macroeconomic stability.

Government-sponsored crop yield insurance, in particular, has been provided in many developing countries as multiple-peril, all-risk programs; that is, insurance compensates all yield losses, regardless of cause, with disastrous consequences (Hazell, Pomareda, and Valdes, 1986). In all cases, the programs have been heavily subsidized and actuarially unbalanced (Miranda and Glauber, 1997; Skees, Hazell, and Miranda, 1999; Skees, 2003). Moreover, there is no evidence that crop insurance has had positive effects on agricultural credit, output, or income (Bassoco, Cartas, and Norton, 1986).

Instead, subsidies encourage excessive risk-taking (*e.g.*, growing unsuitable crops in high-risk regions) and increase exposure to future (drought) losses by the farmer (Kaplow, 1991; Kunreuther, 1996). Furthermore, crop insurance may at best help farmers who grow insured crops, but it is of no assistance to the rest of the rural population (landless laborers, agricultural traders and processors, farm input suppliers, rural shopkeepers) whose livelihoods are also affected by catastrophic agricultural output and income outcomes.

Microinsurance innovations are needed to match the microfinance revolution (Skees, 2003). There are some promising innovations, most notably with **area-based index contracts**, such as regional rainfall and other weather insurance. These contracts are written against specific perils or events defined and recorded at the regional level. Insurance is sold in standard units and all buyers receive the same indemnity. These features avoid adverse selection and moral hazard problems and reduce operating costs (Skees, Hazell, and Miranda, 1999). New types of state action are also required to facilitate the development of these contracts.

Moreover, insurance is not the only mechanism available for the management of risk. In developed countries, commodity futures and options markets are used to manage price and exchange rate risks (Thompson and Bond, 1987). Educational programs can assist farmers in developing countries to use these market-based institutions, when they exist. In general, however, instruments for hedging, futures markets and commodity exchanges are thin if not inexistent in these countries (Wenner, Alvarado and Galarza, 2002). The absence of these market-based instruments is due to similar information and incentive problems as those that plague financial and insurance markets. Government action can assist in the creation of the institutional infrastructure needed for the operation of these mechanisms.

In summary, development of broader and deeper rural financial markets will require the elimination of obstacles to an expansion of legitimate demands for rural financial services. Key to this process will be the provision by the state of basic public goods needed to reduce transaction costs and risks for potential borrowers and depositors. Also critical will be the adoption of macroeconomic, sector, and investment policies that would not increase risks further and that would improved the productive opportunities available to the clients of rural financial intermediaries. Among these interventions, the development of an appropriate prudential regulation and supervision framework is the most important challenge for the authorities.

6.3 Promoting the Expansion of the Supply of Rural Financial Services

Government and donor interventions are also needed to increase the supply of rural financial services. The supply of rural financial services is constrained by:

(a) high transaction (operating) costs for lenders, which increase the costs of lending well above the opportunity cost of the funds and which can only be recovered with high intermediation margins (Cuevas and Graham, 1984);

(b) high transaction (operating) costs incurred in mobilizing deposits, which increase the cost of funds for the financial intermediary well above the returns that must be offered to the depositors to attract their funds (Owens, 2002);

(c) additional costs of mobilizing deposits that emerge from the need to meet the regulatory requirements for deposit mobilization (*e.g.*, reserve requirements, minimum safety requirements, internal control);

(d) high credit risks for lenders, which threaten with losses of income in case of arrears and losses of equity capital in case of default;

(e) high liquidity risks in deposit mobilization, which make it necessary to keep liquid, less-attractively remunerated reserves and which require additional financial costs in case of unexpected deposit withdrawals (Christen, 1997);

(f) imperfections of information about the ability and willingness to repay loans of applicants, which increase both the operating costs and the losses from default of lenders (Gonzalez-Vega, 1976; Navajas, 1999);

(g) inability to raise interest rates as a rationing device, due to adverse selection problems, which leads to non-price credit rationing (Gonzalez-Vega, 1976; Keeton, 1979; Stiglitz and Weiss, 1981);

(h) absence of compatibility of the incentives that guide the behavior of potential borrowers and lenders, creating spaces for moral hazard (opportunistic borrower behavior), and thereby raising the operating costs and risks of lenders (Conning, 1999);

(i) absence of compatibility of the incentives that guide the behavior of deposit-takers and potential depositors, creating spaces for moral hazard (opportunistic behavior of deposit-takers), and thereby raising the risks for depositors (Chaves and Gonzalez-Vega, 1994);

(j) absence, deficiencies, and high costs of formal contract enforcement mechanisms, which increase the credit risks and operating costs of lenders and the risks of depositors (Heywood and de la Peña, 2003);

(k) the attenuated property rights and inefficient governance structures of many rural financial intermediaries, which do not generate sufficient internal control or the adoption of business plans focused on outreach and sustainability (Chaves, 1996);

(l) the destruction of social capital (*e.g.*, a culture of repayment) that accompanies the politicized pardoning and rescheduling of loans, weakening the credibility of contract threats and obligations (Aguilera-Alfred and Gonzalez-Vega, 1993);

(m) market distortions introduced by non-private intermediaries that refuse to operate on market terms, thereby undermining the operations of serious competitors (Gonzalez-Vega, 2002b);

(n) the high covariance of cash flows of potential rural depositors and borrowers, which creates significant seasonal challenges for the management of liquidity;

(o) the high covariance of incomes and of the outcomes of the productive efforts of borrowers, which reduces opportunities for portfolio diversification as a tool to manage risk by lenders (Binswanger and Rosenzweig, 1986);

(p) the small size and low density of the clientele in local markets, which reduces the opportunities to dilute the fixed costs of any financial infrastructure (Chaves and Gonzalez-Vega, 1996), and

(q) the public good nature of the information generated by an expansion of the supply of rural financial services, which keeps the rate of private investment in experiments to develop innovations in lending technology and the expansion of these services below the socially optimum rate of expansion.

Most of these difficulties are typical of all financial markets; the problem is that they are more acutely present in rural areas, thereby frequently raising the associated costs and risks to prohibitive levels. As a result, rural financial markets do not emerge. Clearly, the provision of the same basic public goods (roads, communications, literacy, safety) that would reduce transaction costs and would facilitate the emergence of a demand for financial services will also contribute to an expansion of supply. The extent to which the development of this physical and institutional infrastructure can contribute to rural financial deepening cannot be overemphasized.

Financial policies have a powerful influence on the supply of rural financial services. Two types of actions are needed. On the one hand, it is indispensable to further reform policies, in order to reduce or eliminate the financial repression introduced by earlier interventions or to prevent the **reintroduction** of protectionist-repressive approaches. On the other hand, it is necessary to develop a policy and regulatory framework that reduces the costs and risks for suppliers of rural financial services.

As discussed in Sections III and IV, financial repression emerged from both the effects of macroeconomic policies on the financial sector –in particular, the inflation tax, the reserve requirements tax on deposits, and the overvaluation of the domestic currency– as well as from financial policies designed to alter outcomes from the market forces of supply and demand. An expansion of the supply of rural financial services therefore requires fiscal, monetary and exchange rate policies that:

(a) eliminate the **inflation tax** on holdings of domestic financial assets,

(b) eliminate the **overvaluation** of the domestic currency, in order to remove distorted incentives that increase preferences for foreign over domestic financial assets,

(c) reduce the rate of legal **reserve requirements** on deposits, to minimum levels, and diminish other influences, such as forced placements of government debt, that crowd out funds away from portfolios of credit for the private sector,

(d) eliminate all ceilings and controls on **interest rates** and other components of the prices of financial transactions, and

(e) eliminate all portfolio **quotas** and other administrative allocations of credit flows.

Interest rate restrictions do not allow rural financial organizations to achieve their sustainability. They are typical of regulatory environments that discourage competition and promote fragmentation. The presence of development banks and other state-owned organizations further reduces competitive pressures. An expansion of the supply of rural financial services therefore requires a regulatory framework that:

(f) promotes competition and lowers barriers to **entry** into rural financial markets to prudent levels,

(g) eliminates unnecessary **fragmentation** in rural financial markets, resulting from specialized charters that prevent competition and the emergence of economies of scale, economies of scope, and portfolio diversification,

(h) eliminates credit programs housed in non-financial institutions, such as the Ministry of Agriculture or the Land Reform Institute, and

(i) establishes a road map for the closing, sale or privatization of state-owned development banks.

When state-owned development banks have already been closed, their reopening is particularly costly. The political costs of their elimination are already sunk and their earlier assets no longer exist. The inevitable **signal** that their re-establishment is a political concession will create a weak structure of incentives for depositors, borrowers, staff and managers, which will not be compatible with its sustainability. Most likely these organizations will fail in their new reincarnation. Moreover, their presence will **crowd out** other attempts by private financial intermediaries (bank and non-bank organizations, credit unions and the like) to operate in the same market segments. This would, once more, discourage processes of innovation and institution building.

Despite their popularity, state-sponsored **credit guarantee** programs are equally undesirable. There is no reason to expect that these second-tier organizations will have comparative advantages over first-tier operators in information, incentive design and contract enforcement for a particular clientele. There is no reason to expect, therefore, that they will be able to resolve problems from asymmetric information and opportunistic behavior. Rather, they most likely will worsen incentive problems in the market. Borrowers who are aware of the guarantee and who are not paying an actuarially-determined premium will have less incentives to repay. Lenders that do not bear the cost of their decisions about creditworthiness will be less diligent in screening and monitoring borrowers and in enforcing contracts. Moral hazard will increase and lenders will have less incentives to learn how to identify and manage risk. The implicit subsidies will cause fiscal losses that eventually lead to the termination of the programs.

Additional government and donor actions are needed, moreover, in order to:

(a) encourage the development and adoption of new financial technologies that would make it possible, at reasonable costs, to reduce the risks of financial transactions for all market participants;

(b) additional institutional infrastructure that would support the implementation of the new financial technologies, and

(c) new institutional designs that would guarantee the adoption of these technologies by organizations with the vocation and capacity to become sustainable.

Implementation of the new, more efficient lending technologies requires the development of a supportive institutional infrastructure. Government and donor actions can contribute to the development of rural financial markets with interventions such as institutional mechanisms that:

(a) improve the availability of information and, in particular, the availability of **credit histories** about the pool of potential borrowers, such as the development of credit bureaus and other rating mechanisms. The prudential supervisor that oversees regulated financial institutions has privileged access to this information and may introduce reporting requirements to create the necessary database. All lending institutions should be granted access to this information. Donors may encourage the establishment of credit rating agencies that collect information about clients of non-regulated institutions as well as investment rating agencies that report on the financial health of non-regulated deposit-taking intermediaries;

(b) reduce the costs of collecting and interpreting information about borrowers or about deposit-takers, such as the development of standard **accounting rules** for financial and non-financial firms and obligatory reporting requirements for financial institutions;

(c) facilitate the introduction of incentives to repay loans. This may be achieved through improvements in the legal framework for the pledging of **collateral** and other forms of loan guarantees (Fleisig and de la Peña, 2003), and

(d) reduce the costs of contract enforcement, such as improvements in the legislation and in the efficiency of **judicial** procedures.

Central to any actions to promote the expansion of rural financial markets is a better definition and protection of **property rights**. This includes review the legal rights of borrowers and lenders (including depositors). Existing legal frameworks are usually characterized by an asymmetric treatment of borrowers and lenders, with a strong pro-borrower bias (Gonzalez-Vega, Prado Guachalla, and Miller Sanabria, 1997).

Examples of this asymmetric treatment are usury legislation and other restrictions on interest rates, ostensibly to protect borrowers, but not matched with legislation to protect the interest rates paid to depositors, who have suffered the consequences of financial repression and of oligopolistic banking systems and have frequently earned negative – expropriatory– interest rates in real terms.

Other pro-borrower biases are legal interpretations about the scope of banking secrecy, which deter the development of credit rating systems, because the debt status of bank clients cannot be divulged. Similarly, prohibitions for certain types of assets (*e.g.*, household goods or capital goods) to be acceptable as collateral hurt those firm-households that have no other goods to pledge (Fleisig, 1995). Moreover, the development of an efficient mortgage and lien system depends on the existence, documentation, and protection of well-defined property rights (de la Peña, 1997). This is particularly important in rural areas, where land can potentially play the role of powerful collateral. Attenuations and restrictions on property rights deprive the rural population from the opportunity to use their land as a mechanism to gain access to loans (Alvarado, 1996).

Restrictions on the use of mortgages as a tool to gain access to loans usually emerge from agrarian legislation that does not grant land reform beneficiaries the full ownership of their plots; instead, they are precluded from offering their land to guarantee a loan. In other cases, the problem emerges from the lack of proper documentation of the property rights. When this is the case, land-titling programs can contribute substantially to the development of rural financial transactions. Demonstration of property rights (ownership and liens on the land) depends, in turn, on the efficient operation of property **registries** with updated information on the legal status of the plots. Affordable instances to resolve conflicts about property rights are also important. Similarly critical are the definition of property rights and the provision of mechanisms for their documentation for movable assets and other forms of property (Fleisig and de la Peña, 2003). An institutional infrastructure that facilitates and reduces the costs of pledging movable assets as collateral is possibly one of the most important potential state actions to improve the performance of rural financial markets, particularly for potential landless borrowers.

Regulation refers to the set of enforceable rules that restrict or direct the behavior of market participants. **Prudential regulation** should aim to contribute to the stable and efficient performance of financial organizations and markets. **Prudential supervision** refers to the examination and monitoring mechanisms through which the authorities verify compliance with and enforce prudential regulation. The multiplicity of organizations that operate in rural financial markets has complicated the tasks of regulation and supervision. The prudential authorities in developing countries and economies in transition need substantial assistance in creating a capacity to deal with this proliferation of organizations and with the different risks that they pose. There is still considerable debate about the best approach in this area. Given the increased instability of financial systems in recent times, as a consequence of international contagion and other external shocks, the framework of prudential regulation and supervision should promote the operation of robust organizations, capable of withstanding these shocks.

6.4 Promoting Financial Innovation

Rural financial deepening fundamentally depends on innovations in financial technologies that make it possible to reach broader clienteles. Existing lending and deposit mobilization technologies do not allow cost-effective responses to the information, incentive, and contract enforcement barriers that curb financial transactions in rural areas. Innovation, however, requires **investments** in experimentation, development, transfer, adoption, adaptation, and learning of the new technologies. These investments are risky, costly, and usually require long gestation periods before any returns are observed.

Typically, the incentives for private investment to undertake these efforts are insufficient, given the significant **externalities** that emerge. Once the new technologies are developed, competitors may find it attractive to imitate their features and can thereby undermine the profitability of the initial investment, by charging less, because they have not paid for all the costs of research and development. Moreover, competitors who have not incurred the costs of training and learning-by-doing can also acquire the new technologies embodied in the loan officers and other staff of the organization, by offering more attractive wages. Because of the nature of knowledge as a public good, these externalities discourage private innovation.

State intervention in financial innovation, however, is problematic. Both the development and adoption of new financial technologies encounter significant difficulties. In effect, adaptation of a given practice to the features of a specific market segment is not a trivial task (Gonzalez-Vega, 1998d). First, this effort requires a flexible framework for experimentation. Indeed, it has been their vast flexibility in exploring alternative solutions to the problems of financial transactions that has allowed microfinance organizations and credit unions to develop their notable innovations. Continuity of efforts is also needed. Specific donor assistance, frequently delivered through internationally-based organizations that possess comparative advantages in institution building, have supported these innovations (Schmidt and Zeitinger, 1998).

Most likely, a multiplicity of experiments is needed, as the appropriate solutions to specific problems are not known ahead of time. If would be inappropriate, for example, to support only organizations that work with group credit or only those that offer individual loans.

Second, financial development is intensive in local information and requires long **learning** processes. Donors can assist in several ways. One is to offer access to the international pool of knowledge about new financial technologies. A clear understanding of general principles, lessons, and best practices is a critical starting point, but it is not sufficient. Finance is essentially about the evaluation of risks, the management of information, and the creation of lender-borrower relationships that carry incentives for the protection of the relationship (Gonzalez-Vega, 1998d). The exact nature of these risks and the precise structures of incentives that sustain these relationships vary from market segment to market segment. The accumulation of information needed to reduce costs occurs locally and gradually, as the organization learns about its clients, about the market where it operates, and about the sources of threats of default. Canned how-to recipes are not sufficient to learn about the market niche. The success of microfinance organizations has ensued only after long processes of learning-by-doing, usually accompanied by close interaction with an international provider of technical assistance. This usually requires a long-term donor commitment to the institution-building exercise (Zeitinger and Schmidt, 2000).

Innovation is also required, moreover, with respect to the institutional design of rural financial organizations. In the end, policies will not be enacted, procedures will not be revised, technologies will not be adopted, if those who have to make the decisions do not find it in their interest to do so. The institutional design of organizations (ownership, control, governance) constrains individual behavior and creates the structures of incentives that guide the decisions that determine performance. The financial organizations that currently have a presence in the rural areas of developing countries have institutional designs that frequently do not promote outreach and sustainability.

Unfortunately, the role of donors in influencing the institutional design of these organizations is not clearly and sufficiently understood (Von Pischke, 1998 and 2003). Donor choices about investing in, lending to, and making grants for technical assistance and other purposes to particular types of organizations will influence the course of institutional development (Schreiner, 1997). These issues will pose the greatest dilemmas and challenges to donors and governments in the development of rural financial markets.

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