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OLD AND NEW PARADIGMS IN DEVELOPMENT FINANCE:

SHOULD DIRECTED CREDIT BE RESURRECTED?

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The views and interpretations in this paper are those of the authors and should not be attributed to the Agency for International Development or the Harvard Institute for International Development.

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This paper is dedicated to Michael Roemer,

a friend, colleague, and economist.

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by

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Since World War II, directed credit programs have been used by governments and donors as broad-spectrum policy tools.[1] Thousands of these programs have been employed to address poverty, to boost production, to speed investments, to promote new technology, to ease disasters, to offset the adverse effects of other policies, to win votes, to form organizations, to hasten land reform, to mollify insurgents, to show concern, to boost exports, to lessen imports, to empower the downtrodden, to promote conservation, and to benefit minorities. In addition, a sizable portion of other development efforts include credit components.

The popularity of directed credit is partially explained by the ease with which lending projects can be done. It may take years to design and build infrastructure such as roads, dams, schools, and electric power grids, but a credit program can be announced immediately and disburse funds within weeks. In addition to ease, numerous policy makers also argue that major flaws in financial markets impeded the flow of loans to individuals who have economic opportunities, but who lack funds to capitalize on them. Directed credit projects have been promoted as ways of correcting these flaws. Many policy makers also feel that directed credit is an effective way of transferring subsidies to preferred groups and activities. These transfers are done through concessionary interest rates and slack loan recovery or loan forgiveness. A general distrust of markets in centrally planned countries and certain aspects of Keynesian thought in capitalist countries have both stimulated directed credit efforts and led to the widespread use and acceptance of the Directed Credit Paradigm (DCP) in the three decades following World War II.[2]

This paradigm dominated development efforts until the 1980s when the Financial Market Paradigm (FMP) emerged. The new approach has made inroads into development activities and resulted in substantial jousting between proponents of these vastly different models. In the discussion that follows we summarize the major elements of the two paradigms, briefly discuss criticisms of the old model and then list the benefits claimed for the new one. We move on to discuss and evaluate two recent sets of arguments put forward in defense of DCP, one arising out of evaluations done by the World Bank and the other stemming from academic work by Stiglitz and Weiss. Our main purposes are to clarify the major points of disagreement between

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[1]We use the term 'directed credit' to cover subsidized loans that are allocated by administrative decisions. Examples of directed credit are loans targeted to small farmers, women, microentrepreneurs, users of selected inputs, and victims of disasters.

[2]"...the term paradigm...stands for the entire constellation of beliefs, values, [and] techniques...shared by the members of a given [professional] community" (Kuhn, p. 175).

supporters of the two paradigms and to draw conclusions about the appropriateness of resurrecting the directed credit paradigm.

I. THE DIRECTED CREDIT PARADIGM

We use seven common but contrasting features in analyzing these two paradigms:

1. the definition of the primary problem;
2. the developmental role assigned to financial markets;
3. the attitude toward users of financial services;
4. the role of subsidies and taxes;
5. the sources of funds employed in credit programs;
6. the design of associated information systems; and
7. the criteria used to evaluate credit programs.

Problem Definition

Advocates of the DCP usually cite market imperfections as justification for directed credit (for examples, see: Besley; Darling; Nelson; Stiglitz and Weiss; and World Bank, 1993). These perceived imperfections include both fairness and efficiency aspects. Centrally planned economies are extreme examples of this where free markets are distrusted to do what is efficient and fair, and where lending is often an integral part of fiscal policy. In mixed economies, imperfections in both financial and non-financial markets are cited to justify administered credit. These include usurious moneylenders, dispersion in interest rates on loans, many poor people who lack access to formal loans, asymmetric information, and bankers who fail to recognize the social externalities of lending to people with credit needs.

The imperfection perspective leads to the conclusion that there are many potential borrowers who are credit constrained -- often people who are poor -- because of badly performing financial markets. Resulting problems include credit rationing where some potential borrowers are unable to obtain any formal loans, or are limited to small loans, while others may borrow too little because of internal rationing caused by high interest rates. Directed credit programs are thought to overcome these market imperfections and to result in loan allocations that are more efficient and more fair than those resulting from unfettered market operations.

Role of Financial Markets

The DCP assigns a star's role in development dramas to credit programs. Loans are viewed as vital inputs in the resolution of growth and poverty problems. Since many people and firms are assumed to have unmet credit needs, the delivery of targeted loans becomes a major feature of development activities. During the 1970s, countries such as Brazil, India, Indonesia, and Mexico used directed credit as their primary development instrument. Accordingly, financial markets are visualized by DCP supporters as vertical channels for directing government or donor funds through administered loans to targeted beneficiaries, while differential loan prices

are seen as levers for stimulating activities preferred by policy makers. Subsidized and directed credit is also thought to be an effective second-best alternative to offset the adverse effects of other policy-induced distortions, such as those caused by disequilibrium exchange rates or price controls. Overall, directed credit is used as a way of validating the views of planners.

Since credit is seen as part of a package of vital inputs, financial institutions are encouraged to diversify into non-financial products and services under the DCP. This includes providing technical assistance and supervision, selling inputs, and buying and selling primary products.

Users

Directed credit programs are usually targeted at individuals, firms, or groups who are called beneficiaries. Borrowers benefit from directed loans they would otherwise not receive because of market imperfections, and they also benefit from subsidies tied to loans. In a few extreme cases, DCP advocates view borrowing as an entitlement, a right of all people. In other extreme cases, the relationship between lender and borrower is patronal, where loans are used to reward behavior deemed proper by policy makers. The DCP focuses on borrowers and pays little attention to depositors as users of financial services -- the paradigm is borrower dominated. A primary objective in the DCP is to form a financial system that is fairer to targeted borrowers, and advocates may view themselves as benefactors.

Sources of Funds

Because directed credit always involves subsidies, including interest rates that are usually concessionary, the bulk of the money lent is inevitably provided by governments or by donors. Since most people in low-income countries are assumed to be too poor or too unsophisticated to save, especially in financial forms, the DCP ignores voluntary deposit mobilization. In some extreme cases, proponents of the DCP denigrate deposit mobilization, arguing that it will lead to funds flowing out of rural or poor areas (e.g., World Bank, 1993, p. 79). In other cases, DCP proponents argue that the supply of rural deposits is highly interest inelastic and therefore nearly impossible to mobilize though voluntary means (Desai and Mellor).

A variety of techniques are used to insert funds into financial markets for directed lending. These include equity investments in lenders, grants that are used by lenders as revolving loan funds, endowment funds, compulsory loans from commercial banks on concessionary terms, and a variety of concessionary rediscount facilities managed by central banks or by other second-story lenders. Foreign borrowing, expansion in the overall money supply, counterpart funds generated by donor programs, and hefty reserve requirements on bank deposits are additional sources of funds for targeted loans.

External sources of funds are preferred by directed-credit lenders because they are less costly than are voluntary deposits. High reserve requirements and other taxes on deposits -- policies often associated with the DCP -- further increase the costs of mobilizing funds through

deposits. Subsidized guarantee programs for loans made with external money can further increase the relative attractiveness of using outside funds compared to voluntary deposits.

Subsidies and Taxes

The litmus test for directed credit is using loans to transfer subsidies to borrowers, be they financial intermediaries or final borrowers. Subsidies are used to attract participation in credit programs, to stimulate targeted individuals to act in ways that accomplish planners objectives, to induce financial institutions to be involved in directed credit, and to reorient the financial system in directions preferred by policy makers. Accordingly, a high degree of subsidy dependence is a defining feature of directed credit (Yaron).

These subsidies emerge in several ways: the first, and often the most important, enters in the form of subsidized interest rates. A rate is subsidized if it is held below the market rate (and becomes negative in real terms if the rate of inflation is greater than the predetermined nominal rate). Credit forgiveness is the second form of subsidy, where partial or total loan default (or forgiveness) results in borrowers repaying less than the amount they owe.

Loan guarantee programs may provide a third type of indirect subsidy, where some of the risks, and thus costs, associated with loan recovery are transferred to a third party (Meyer and Nagarajan). A subsidy is involved when the full costs of the risk transferred are not covered by insurance premiums.[3]

As with any subsidy, however, someone must be taxed to provide subsidies. Directed credit is supported by a variety of additional policies that tax various individuals and firms to subsidize borrowers. These include portfolio quotas that constrain loans to non-favored borrowers, high reserve requirements against deposits, and low interest rates paid on deposits resulting from other restrictions or from concessionary rediscount lines.

Information Systems

The DCP involves collecting and processing large amounts of information -- it is data dense. This is a result of the primary reasons used to justify directed lending: satisfying credit needs through administered lending. A substantial portion of the data collected, processed, and reported focuses on documenting compliance with lending targets. This involves collecting data about the characteristics of borrowers, the intended uses of loans, the effects loans had on borrowers' activities, loan disbursements, and compliance with lending targets or quotas. As with the flow of funds under the DCP, the reverse flow of data is primarily vertical, from bottom to top.

[3] A discussion of the costs and benefits of loan guarantee programs is presented in Annex 2.

Typically, organizations involved in directed lending are managing multiple lines of credit aimed at different target groups or activities. A government-owned agricultural bank, for example, may be administering several dozen lines of credit for different products and farm sizes, some of which are funded by the central government and others by donors. Each credit line may have unique objectives and reporting requirements in terms of format, data, and timing. The basic rational for directed credit is that various target groups have specific credit needs, so that reporting requirements are idiosyncratic. In a few cases, a funding or loan guarantee agency may require lenders to forward copies of borrower business plans along with loan application forms to them for approval. In virtually all cases, the funding or guaranteeing agencies require periodic detailed reports showing compliance with directed credit objectives.

Various types of credit-impact studies aimed at measuring the results of a directed credit project are also commonly a part of this data gathering process; bank audits usually check on compliance with these targets. Pressures to provide documentation of directed credit activities generally lead to dense, but fragmented data flows.

Evaluations

Since the objective of directed credit is to push or assist something or someone, evaluations of these efforts typically focus on measuring the impact of loans at the borrower level (see Sebstad and others for an example). Impact may include changes in income, investment, employment, production, yield, use of particular inputs, or improvements in the well-being of borrowers. Although directed credit programs often are predicated on assumed market imperfections, DCP evaluations seldom document the extent to which any market imperfections exist and are overcome through the targeted lending effort.

Two types of impact studies may be done. One is the before-and-after method, and the other is the with-and-without technique (David and Meyer). The first involves collecting information about borrowers' activities before obtaining loans and then later measuring changes in their activities after borrowing. The with-and-without approach compares activities of a sample of borrowers with the parallel activities of a control group of non-borrowers. The differences between the two groups are then attributed to loan use -- the impact of loans.

Success stories are still another, less formal, way of reporting on the impact of directed credit programs. This typically involves ad-hoc case studies that describe the accomplishments of several borrowers. These studies are popular because they are less costly and less time consuming than are more formal and more representative impact studies.

Because projects are justified on the basis of what they do for borrowers, bank examiners under the DCP emphasize compliance with lending targets, rather than common measures of financial institution performance such as solvency, liquidity, earnings, and management and asset quality. Since deposit mobilization is not important in the DCP, relatively little emphasis is given to prudential regulation and the collection of information that is useful in this regard.

II. CRITICISMS OF THE DCP

Major criticisms of the DCP began to emerge in the early 1970s with the review of small farmer credit programs done by the Agency for International Development (1972-73) and in the academic work of Shaw (1973) and McKinnon (1973). Additional concerns surfaced in subsequent academic research, in an FAO-sponsored conference in Rome (1975), and especially in a 1981 colloquium in Washington, D.C., sponsored by the World Bank and the Agency for International Development (Adams and others, 1984).

Initially, concerns about the DCP concentrated on loan recovery problems. Some of the directed credit programs had chronic loan recovery difficulties, and many of these efforts only sustained lending through continuing subsidies (Donald; Rice). In cases including several countries in Latin America, the Philippines, Sri Lanka, and Indonesia, large subsidized credit programs collapsed in the 1970s and early 1980s, adding to the criticism of the DCP (see Sacay and others).

Subsequent criticism focused on six additional issues: (1) that the DCP boosted transaction costs for both borrowers and lenders; (2) that credit subsidies and associated taxes were distributed regressively; (3) that the DCP discouraged deposit mobilization; (4) that directed credit weakened financial institutions; (5) that directed credit had a weak and ambiguous effect on production and investment decisions; and (6) that evaluations of DCP projects were flawed and yielded misleading results.

Transaction Costs

Researchers have documented substantial increases in transaction costs -- for both lenders and borrowers -- caused by the DCP (for example, see Cuevas and Graham). The expenses incurred by lenders in complying with DCP monitoring and reporting requirements entailed in managing multiple lines of directed credit are a major part of these costs. The excess demand for subsidized loans also allows lenders to add conditions to DCP credits -- non-price rationing devices -- that raise borrowers' loan transaction costs. This includes the opportunity costs of time spent in navigating cumbersome borrowing procedures, transportation costs of visiting the lender a number of times to transact a loan, costs of providing acceptable collateral, and, in some cases, paying bribes to influence lending decisions.

Regressivity

Critics also contend that directed credit fails to ameliorate poverty and, in fact, may end up helping mostly individuals who are relatively well-to-do. Four elements are included in this argument. First, interest rate subsidies, as well as the income transfers captured by borrowers who default, are directly proportional to the size of associated loans. Large borrowers capture large subsidies, small borrowers capture only small subsidies, and those individuals who cannot access subsidized loans receive no credit subsidy. Since loan access is highly correlated with borrowers' income and assets, subsidies attached to loans end up being distributed

regressively. Empirical evidence from Brazil, Costa Rica, and Jamaica are cited by supporters of the FMP to justify this assertion (Vogel and Gonzalez-Vega; Adams and Tommy; World Bank, 1993, p. 159).

Second, the additional transaction costs imposed on borrowers by the non-price procedures used to ration subsidized loans weigh heavier on borrowers of small amounts than they do on borrowers of large amounts. If, for example, these procedures impose additional costs of $100 on each loan transaction, borrowers of $1,000 for a year at a nominal interest of 10 percent incur an annualized borrowing cost of 20 percent, while borrowers of $100,000 for a year at the same 10 percent interest rate would incur borrowing costs equal to only 10.1 percent of the value of their loans. These major differences in effective borrowing rates -- though explicit interest rates charged on the loans are the same -- partly explain why borrowers of small amounts may prefer informal loans that carry higher interest rates than do subsidized credit programs, but which impose much lower transaction costs than does directed credit.

Third, subsidized loans force financial intermediaries to pay below market interest rates on deposits. These low rates effectively "tax" depositors and transfer subsidies to borrowers. Normally, the average depositor has fewer assets and lower income than does the average borrower. This is especially true when financial markets are repressed. Relatively wealthy individuals typically have more savings options -- including moving their funds abroad -- than do relatively poor people and are thus able to avoid the "taxes" placed on deposits more easily than poor people with fewer savings options.

Fourth, financial markets that process subsidies attract rent seekers. Typically, those who are most successful in capturing these subsidies are individuals and firms that already receive special considerations in the society: the politically powerful, military leaders, current bank clients, people who are relatively well-to-do, or individuals who have connections inside the financial institutions administering the subsidy. When large subsidies are involved, especially over prolonged periods, employees of the intermediary may feel justified in seeking to share in the largess by eliciting bribes to process subsidized loans.

Because the demand for subsidies is essentially infinite, large and experienced borrowers have strong incentives -- and usually wrangle the opportunity -- to capture as much of the subsidized credit as they can. Attempts to overcome these tendencies by granting preferentially-low interest rates on small loans exacerbates these problems by forcing lenders to charge the lowest prices on the loans that are the most costly for them per-unit-of-money lent. Likewise, attempts to impose a ceiling on loan size is easily evaded by making multiple loans -- each under the ceiling -- to preferred clients. Critics of the DCP argue that subsidies associated with directed credit heighten, rather than lessen, the credit-equity problems that initially induced policy makers to promote directed credit. Under directed credit, relatively well-off borrowers continue to capture most of the loans, and, in addition, they capture most of the subsidies attached to the loans.

Deposit Mobilization

Critics also argue that the DCP discourages deposit mobilization (see Agency for International Development, 1991, and Sacay and Randhawa for examples). As noted above, low interest rates on loans force intermediaries to pay even lower rates on deposits, thus decreasing the relative attractiveness of deposits as a saving alternative. Access to low-cost external funds further discourages intermediaries from seeking deposits that may be more costly to mobilize than funds drawn from directed credit lines. Sustained access to cheap external funds typically deflects lenders from mobilizing potentially larger amounts from individual depositors. Reserve requirements and other taxes on deposits -- policies that are commonly associated with financial market repression and the DCP -- further discourage deposit mobilization.

The lack of deposits renders the lender more vulnerable to the whims of the government and donors. In extreme cases, this may involve extensive use of the financial system to allocate political patronage under the guise of targeted lending, thereby exacerbating loan recovery problems.

Weakened Institutions

Critics have further argued that losses from loan default and from margins that do not cover lender costs have undermined the economic vitality of institutions handling directed credit. This makes them subsidy dependent and also makes them more vulnerable to colonization by rent seekers. The collapse of part of the rural banking system in the Philippines, insolvent development banks in countries such as Bolivia and Jamaica, and weakened credit unions in many countries such as the Dominican Republic, Honduras, and Ghana are cited as evidence of the corrosive effects of directed credit on participating institutions (Bourne and Graham; Gonzalez-Vega).

Production/Investment Effects

Critics of the DCP also argue that fungibility -- the dominant characteristic of money -- weakens the ability of planners to promote selected activities through directed credit (Von Pischke and Adams). This feature of money allows borrowers to exercise diversion and substitution of funds when it is in their best interests to do so (see the following section). Critics argue that subsidies can be used to induce individuals to borrow, but that these subsidies do not alter the relative profitability of investment and production options available to borrowers. Rational borrowers will direct the additional liquidity provided by any loan to the highest return alternative available to them, be it the objective of the directed loan or not. This diversion is essentially impossible to control when large numbers of loans are involved, especially in rural areas. Only if the highest return alternative is the same as the objective of the directed credit

will the interest of the planner and the actions of the borrower coincide. If they do coincide, there is no need for directed credit in the first place -- targeting is redundant.

An extreme example illustrates this important point. During the 1980s, the U.S. Government attempted to discourage the production of coca in Peru and Bolivia. This included providing subsidized loans to farmers cultivating coca to diversify into other crops such as corn and rice.[4] Since the credit was subsidized, farmers were induced to secure loans, supposedly to substitute other enterprises for coca production. After securing the loans, however, farmers had overwhelming incentives to invest the borrowed liquidity in cultivating additional coca that promised relatively secure net returns of thousands of dollars per hectare, rather than in rice or corn that promised riskier net returns of a hundred dollars or less per hectare.

Misleading Evaluations

Criticism has also been leveled at the techniques used to measure credit impact. This includes two general reproaches: (1) that traditional credit impact studies systematically overestimate the benefits of credit use; and (2) that they also systematically underestimate the costs of directed credit programs (Adams, 1988).

Numerous credit-impact studies use the before-and-after approach to document credit impact, in which changes in borrower performance over the period studied are attributed to loan use. Most of these studies, however, do not control for the positive effects on borrower performance of other factors that change independently, but concurrently, with loan use. For example, most of the additional income realized by rice farmers from one year to the next may be due to increases in rice prices, favorable weather, or improved technology, and only slightly due to loans taken to sustain fertilizer applications. Assigning all of the positive changes to loan use may seriously overestimate the actual impacts of credit when other favorable changes are occurring in the economy.

Furthermore, one never knows what the borrower would have done without the formal loan -- the counter factual question. Financial instruments, particularly money, are fungible, and one source of liquidity can be readily substituted for another. Thus, a tailor needing funds to buy cloth -- but unable to obtain a formal loan -- may purchase the material on informal credit from a merchant. If tailors are instead able to obtain formal loans, they may simply use these borrowed funds to substitute entirely or partially for other sources of liquidity available to them, including informal loans and their own funds, especially when subsidies are involved. Given the substitution alternatives that are available to many borrowers, it is extremely difficult to tie borrowing with end use. Ignoring substitution is an additional source of inflated benefit claims for credit impact. At least some substitution occurs with any borrowing, otherwise the

[4]These credit programs ignored the fact that most of the coca farmers were awash in funds resulting from the extremely high prices paid for illegal coca products during the mid-to-late 1980s. Many farmers had ample funds, without borrowing, to invest in alternative enterprises, but decided not to do so because of the relatively low rates of expected return from alternative activities.

lender is inducing borrowers to do something they would completely avoid lacking the loan, an unlikely situation.

With-and-without studies have other flaws that inflate estimated benefits. The presumption behind this type of study is that the difference in performance between a group of borrowers and a control group of nonborrowers is due to loans. The key assumption is that individuals in the two groups are identical except that one group receives formal loans and the other does not. This method avoids the attribution and substitution problems mentioned earlier, but it is susceptible to selectivity bias. Credit programs with integrity should screen clients for creditworthiness, that is, for their entrepreneurship, for their economic opportunities, for their character, and for their ability to repay. This screening makes it virtually impossible to assemble an identical control group. Part or most of the superior performance observed in the borrowing group may be due to selectivity bias rather than to loan use. The borrower group would likely have shown superior performance, compared to the control group, even in the absence of loans.

Credit-impact studies have also been criticized for underestimating or ignoring costs associated with credit projects. These costs include the wear-and-tear on organizations channeling the funds: negative margins; loan recovery problems; corruption; political intrusions into lending decisions; and insolvency. Additional costs include the losses suffered by savers who receive low returns on their deposits, and losses by the overall economy because of the less efficient allocation of resources caused by financial market repression associated with the DCP (Shaw).

Unsatisfactory results and mounting criticism, combined with increased enthusiasm for the private sector and freer markets, caused a decline in funding for many directed credit programs in the late 1980s, especially those handled by government owned institutions (World Bank, 1993). This encouraged experimentation with other approaches that later led to the formation of a new paradigm that focused on development of financial markets and institutions rather than on providing administered credit (Gonzalez-Vega; Krahnen and Schmidt; Patten and Rosengard). The outlines of this new paradigm were presented in publications issued by the Agency for International Development and the World Bank (Agency for International Development, 1991; Buttari; Lieberson; Schmidt and Kropp; Von Pischke, 1991; World Bank, 1989; and World Bank, 1991).

III. TRANSITION TO THE FMP

The transition to the new paradigm was encouraged, in large measure, by general economic and financial reforms in numerous countries that provided an enhanced environment for financial markets (McKinnon 1988). These reforms included privatization, fewer distortions in exchange rates, less inflation, elimination of price controls and subsidies, liberalized interest rate policies, and less repression of financial markets. Some elements in the DCP were inconsistent with these reforms, and this forced, in some cases, adoption of the FMP.

Only a few countries such as Chile and El Salvador applied the FMP countrywide. Partial adoption or application of the FMP to specific institutions or sectors is the more common experience, with examples being the Dominican Republic, Egypt, Malaysia, Peru, the Philippines, and Uganda. Recent reforms of credit unions in Guatemala, Honduras, and Niger also used the FMP.

One of the most interesting applications of the FMP began in the early 1980s in Indonesia. Previously, the Indonesian government had made aggressive use of the DCP, especially in rural areas. In the late 1970s, the Bank of Indonesia (the Central Bank) was administering several hundred directed credit lines, many of them targeted to rural areas or for agricultural purposes. Budgetary pressures and unsatisfactory performance of some major directed credit programs caused the government in the early 1980s to begin experimenting with the FMP.

This change was most dramatic in the case of the Bank Rakjat Indonesia (BRI). Through approximately three thousand sub-branches, the BRI during the 1960s and 1970s had implemented several incarnations of a nationwide rice promotion program. Loan defaults and the need for persistent subsidies caused the government to abandon its credit-driven rice promotion program for the most part in the early 1980s. The BRI thus faced the choice of closing most of its sub-branches or reforming the system. It chose reform and applied the FMP in doing so. Success in mobilizing deposits, extending small loans, and making hefty profits for the BRI through microfinance has been thoroughly documented by supporters of the program (Patten and Rosengard; Robinson).

In part, the relatively short list of FMP success stories is due to the time required for implementation of the paradigm, including the time necessary to carry out the more general reforms needed to reinforce the FMP, as well as the subsequent institutional development. A project following DCP guidelines can lend funds quickly after a need is identified. Reforms such as those carried out in the BRI, a few development banks, and a handful of credit unions may require a decade to take root and flower. Sustained leadership and political commitment for these types of long-run reforms are often lacking, especially when the costs come early and the benefits only surface later.

It has also been difficult for donors to support the FMP strongly. Some of them are still committed to the DCP, and others are internally divided on which paradigm to support. Some donors who wish to support the FMP find it difficult to do so because they are unable to use traditional donor technologies in the process. Donors have found it particularly difficult to reconcile moving large amounts of funds through loans or grants with the promotion of deposit mobilization. Political mandates for donors that involve targeting of assistance further complicates support for the FMP. Almost never are depositors targeted in these political mandates. Support for directed credit by a large number of influential non-governmental organizations (NGOs) applies further pressure on donors to continue using the DCP.

IV. THE FINANCIAL MARKET PARADIGM

There are fundamental differences between the DCP and the FMP. Advocates of the DCP tend to view loans as a one-time treatment for beneficiaries' problems, while FMP advocates are more concerned with developing durable and sustained relationships among financial intermediaries, creditworthy clients, and depositors. DCP supporters are also less concerned with the well-being of financial infrastructure than are FMP promoters. The DCP involves using loans to transfer subsides, while this is seen by FMP supporters as destructive of the financial system.

Problem Definition

The FMP stresses transaction costs as the dominant problem in financial markets.[5] This includes costs incurred by both providers and users of financial services. These costs are particularly large in rural areas and in the provision of microfinancial services. Transaction costs are seen as the most important factor constraining the expansion of formal finance. In directed credit programs, lenders may impose additional transaction costs on non-preferred borrowers as rationing mechanisms. Other policies may also inadvertently increase these costs or redistribute them among participants. Policy changes that reduce transaction costs and cost-reducing innovations are the major ways of lowering these costs and allowing the formal financial frontier to expand.

Proponents of the FMP argue that a combination of interest rates and the transaction costs imposed on users of financial services, not interest rates alone, are the determinants of the demand for financial services. FMP supporters also tend to view informal finance favorably, in part because associated transaction costs are typically low, and partly because of the ability of informal finance to provide sustained microfinance. FMP advocates further argue that their paradigm fosters economies-of-scope, economies-of-scale, and efficiencies that result from specialization in financial intermediation.

Role of Financial Markets

The FMP assigns a different role to financial markets in development than does the DCP. Financial activities are viewed by FMP supporters as accompanying, not leading, economic opportunities. FMP supporters also see financial markets as increasingly important infrastructure that is needed to facilitate exchange, trade, and specialization. In addition to the role of money as a medium of exchange and store of value, the most important contribution of financial markets is to enhance the efficiency of resource allocation between surplus and deficit units and areas. An efficient financial system also helps lower transaction costs throughout the

[5]Concern with transaction costs in financial markets ties into similar concerns emerging from the new institutional economics. See Williamson for an example of this broader concern.

economy. Under the FMP, financial institutions are encouraged to avoid non-financial activities and to specialize in processing financial contracts.

The DCP has an anomalous, if not inconsistent, view of the importance of finance. On one hand, loans are seen as crucial inputs for production, for stimulating new products, and for promoting the adoption of new techniques by firms that are short of funds. Credit is also thought to be an effective way to transfer subsidies to individuals, to help them with their undertakings, and also to alleviate poverty. On the other hand, there is little appreciation of the costs of financial intermediation and the losses that occur from repressing this process, thereby suggesting that finance in unimportant.

Before 1973 and McKinnon and Shaw, financial theory was largely limited to the consideration of money and its various roles. It was not until McKinnon and especially Shaw drew upon Gurley and Shaw (1960 and 1967) to emphasize the importance of financial intermediation and finance as a service industry that there was a basis for clarifying the potentially high costs of financial market repression. Thus, under the new paradigm, finance is seen as crucial for the services that it supplies, especially intermediation, but is seen as being less important than under the DCP in that it cannot substitute for trade, prices, infrastructure, and other factors that directly foster development.

Subsidies and Taxes

Financial institutions in the FMP are guided, rewarded, and disciplined by market forces. They pay and charge market rates of interest. They persist if they provide competitive financial services and fail otherwise. Competition forces survivors to be innovative in producing attractive financial products and services and also in lowering transaction costs. Since financial institutions are not involved in transmitting subsidies attached to loans under the FMP, they are also not involved in taxing financial market participants. The absence of fiscal functions allows the financial system to specialize in finance, to deflect rent seeking, and also to avoid imposing taxes on participants. Any subsidies that are inserted into the financial system are short-term and limited to encouraging innovation and to supporting appropriate policy changes. Emphasis throughout the financial system is on maintaining independence from subsidies. FMP supporters argue that income distribution problems should be dealt with by direct transfers, rather than through distorting financial markets. They also argue that product and inputs prices, along with technology, are far more powerful and effective simulators of production than are loans.

Users

Under the FMP, users of financial services are seen as valued clients rather than as beneficiaries. In turn, the providers of financial services and products see themselves as business people rather than as benefactors. They maintain or expand their businesses by selling high quality products that are competitively priced and using procedures that impose only

modest transaction costs on clients. Self interest, rather than altruism, dominates decisions throughout the system. Under normal conditions, a much larger number of depositors than borrowers would be using formal financial services -- the paradigm is depositor dominated and treats savers more fairly than does the DCP.

Sources of Funds

Voluntary deposit mobilization is stressed in the FMP (Vogel 1984). Unlike the vertical channeling of funds in the DCP, the dominant circulation of funds in the FMP is horizontal. That is, most institutions in the formal financial system are expected to mobilize from depositors a large part of the funds they lend. Some flows of funds -- both vertical and horizontal -- between segments of the financial system may nonetheless occur to meet temporary shortfalls in liquidity or to reallocate geographically surplus funds to higher return alternatives. The FMP stresses the importance of correct pricing of these transfers. Transfer prices must be high enough to discourage substitution of vertical transfers for voluntarily mobilized deposits.

The stress on deposit mobilization also requires enhanced prudential regulation and supervision, especially to protect depositors of small amounts. This entails collecting information that accurately reflects the financial strength of institutions handling deposits. It may also include carefully designed deposit guarantee programs that protect a proportion of deposits, particularly those of the microsaver.

Information Systems

FMP information systems are lean and primarily used for managing organizations, screening clients, recovering loans, and measuring the overall performance of the financial system. This includes keeping track of loan and deposit transactions, status of loan recovery, costs of operation, managing liquidity, and recording profits-and-losses. In addition, some of this information may be subdivided by loan officer or by banking unit to implement employee incentive systems. In large measure, information systems in the FMP are horizontal, although some vertical information flows are needed to assure prudential behavior and also to allow some overall review of the performance of the financial system. These vertical flows of information, however, are much simpler, less dense, and more unified than are the vertical flows of information under the DCP.

Evaluation

In contrast to DCP evaluations where beneficiary performance is the focal point, the FMP stresses employee, organization, and system performance. Overall evaluation of financial market performance focuses on loan recovery, numbers of clients served, transaction costs, profitability, and sustainability of the system.

FMP evaluations rely on secondary information normally generated by carefully managed businesses. In contrast, evaluations under the DCP require collection of primary data about borrowers and their activities that are not normally assembled by lenders, except where they are involved in directed credit.

Under the FMP, the gains realized by borrowers and depositors are inferred from their willingness to pay and receive market prices in effecting financial transactions and in meeting their contractual obligations. If there are no subsidies attached to loans and if borrowers repay, one can infer from their voluntary actions that borrowers benefit from loan use.

V. WORLD BANK STUDY

Several fronts of contention persist between supporters of the DCP and proponents of the FMP. The first is summarized in a World Bank, Operations Evaluation Department (WB/OED) Report, issued in 1993 (also see World Bank, 1994), that presents a positive view of agricultural credit projects carried out by the World Bank under the DCP. The second surrounds the academic work on imperfections in information systems associated with financial transaction and imperfections in financial markets in general, discussed in section VI below.[6]

The World Bank/OED Study

The WB/OED Report presents an ardent defense of the DCP and a vigorous attack on the FMP.[7] The overall conclusion of the study is that the results of the World Bank's directed agricultural credit projects, "...are basically satisfactory, especially when measured against their original objectives" (7.16). Our assessment of the Report focuses on the extent to which these original objectives were in fact achieved. Our critique is tempered by three considerations:

- As suggested in the foregoing discussion of research methodology, documenting the impact of loan use is extremely difficult, time consuming, and costly. Many of the questions raised in the WB/OED Report are difficult to answer. Lacking proper data, observers of honest intent can disagree over how to interpret the fragments of information that are typically available on credit activities. The paradigm out of which advocates view the issues strongly influences -- possibly dominates -- their conclusions.

[6]A third front is continued support for the DCP by Japan's representatives on the Board of Directors of the World Bank, their argument being that directed credit was effective in at least some countries in East Asia. Literature that supposedly documents their argument does not make it clear if rapid development in many East Asian countries was in spite of, or because of, some use of directed credit.

[7]E.B. Rice, a World Bank employee, is the primary author of the study.

- Credit programs are strongly influenced by the macroeconomic, macrofinancial, and social environments in which they operate. Many of the problems in earlier directed credit programs were the result of the hostile economic environments in which these programs were placed. It is difficult to separate the adverse effects of these environments on credit programs from the effects of using a flawed paradigm.

- The DCP and the FMP have quite different objectives. It is unfair to judge a DCP project ex post using FMP criteria. For example, the original objective of a DCP project may have been to increase the use of farm tractors, but supporters of the FMP may later criticize the project because it was heavily subsidy dependent, a concern that was not within the original purview.

Background of the Study

Since funding its first agricultural credit project in Peru in 1955, the World Bank has financed about 700 other projects with major agricultural credit components in 94 countries. This has involved more than US$16 billion, comprising approximately a quarter of all Bank funding for agricultural purposes during the late 1970s and 1980s. Until the 1980s, virtually all of these credit programs were designed using the DCP. Starting in 1983, a few of the World Bank's agricultural credit projects were designed with some elements of the FMP, the first of these being in the Philippines (World Bank, 1993).

The volume of the World Bank's agricultural credit projects peaked in 1983 and then declined rapidly. The decline was due, in part, to some shift in World Bank emphasis away from projects to a variety of policy oriented programs aimed at prompting economic and structural reforms. A decline in the priority given to agriculture also played a role, but disappointing results and increasing criticism of the DCP hastened the contraction in traditional agricultural credit projects funded by the World Bank. Finally, Operational Directive 8.30 on Financial Market Operations, issued in the early 1990s, throttled World Bank-sponsored agricultural lending (World Bank, 1991). The WB/OED study was conducted during a time of intense disagreement in the World Bank between advocates of the DCP and supporters of the FMP. DCP advocates were mostly project officers, the individuals in the Bank whose promotions and pay raises largely depend on the number of projects they design and have approved for funding. FMP supporters were mostly economists and finance specialists in technical support and policy making positions.[8]

Study Design

[8]It is ironic that the Task Manager for the WB/OED study directed the Spring Review of Small Farmer Credit for the Agency for International Development in 1972-73. The results of that Review documented extensive problems with DCP programs and seeded ideas that later contributed to the formation of the FMP (Donald; Rice).

The WB/OED study focuses on World Bank agricultural credit projects from the late 1970s through the early 1990s.[9] It is based mainly on Performance Audit Reports [PARs] and Project Completion Reports [PCRs] done by the Bank over the five year period 1987-1992 (WB/OED, p. I).[10] These reports document the progress (PARs) and final results (PCRs) of Bank projects. The reports were mostly prepared by World Bank staff or by consultants hired by the World Bank, rather than by independent observers. Most of the numerical information in the OED Study was drawn from the PARs. This was supplemented by case studies of four major borrowing countries and five other smaller-country studies.[11] Information from a study on rural finance in India, done in 1992 (Binswanger and Khandker), was also used to buttress several arguments presented in the WB/OED Report. Interviews with World Bank staff in operational divisions provided additional information. The "...report represents a shared perception [between OED and operations staff] of the features of the [Bank's agricultural credit] portfolio " (p. I).

A total of 41 agricultural credit projects completed during the period 1987-1991, along with reviews of 18 broader rural development projects with credit components, were the sample of projects analyzed (WB/OED, Annex D). These included most of the largest agricultural credit projects, most of which were aimed at providing additional medium- and long-term loans to farmers. In general, most of the selected projects had all or some of the following four objectives:

- to expand the amount of term lending made to farmers;
- to stimulate farm investments;
- to increase farm output; and
- to strengthen associated financial institutions.

Research Methods

The WB/OED Report is mute regarding the methods used to measure credit impact in either the PARs, the PCRs, or the case studies. Since most of the analysis was based on secondary information, some variant of the before-and-after technique seems to have been the main approach used. Surprisingly, the Report fails to cite specific information from any PARs or PCRs to document borrower-level impact from directed credit use. The paucity of citations of specific country information provided by the PARs and PCRs may reflect an absence of systematic techniques used to measure borrower-level impact in these reports. Some of the most important impressions about credit impact seem to have been drawn from a WB/OED study of agricultural credit done in the mid-1970s, nearly 20 years earlier (World Bank, 1976).

[9]The 1993 study built on an earlier evaluation of the World Bank's agricultural credit projects done by OED in 1976.

[10]Numerical citations are to paragraph numbers in the WB/OED study.

[11]Only the Case Study of Jamaica is formally included in the WB/OED Report (Annex G).

Careful researchers tie their work to other research by reviewing literature and referencing earlier studies. Aside from several casual references to publications supporting the FMP (mainly on pages 7 and 8), the Report is devoid of citations of research done outside the World Bank. Readers are left to puzzle why the Report fails to mention major studies of agricultural credit financed earlier by the World Bank, such as the huge study of agricultural credit in India completed in 1989 (Khusro and others). Hundreds of studies of rural finance in other countries where the World Bank has had major agricultural credit programs (Brazil, Indonesia, Mexico, and the Philippines, for example) are also ignored by the WB/OED Report.

Critique

Our critique of the WB/OED Report examines the research methods used by the Report, the quality and quantity of empirical data presented, and how closely conclusions are linked to supporting data. Our aim is to assess the validity of the conclusion that World Bank agricultural credit projects have "...played an important role in capital formation on small scale farms and firms, helping the transition to a science-based commercial agriculture" (7.42). We concentrate on the evidence provided in the Report to substantiate the four primary objectives, mentioned earlier, for most World Bank funded agricultural credit projects.

The strongest defense that advocates of the DCP might make for their approach is to show that directed credit projects achieved their original objectives. If most of the World Bank's 700 credit projects have helped to expand substantially the amount of term lending for farmers, boosted farm investments, stimulated farm output, and strengthened associated lending agencies, the WB/OED Report is justified in claiming success for the World Bank's agricultural credit projects. There would be no need to refute arguments made in favor of other paradigms -- no need to respond to Johnny-come-latelies who promote other objectives. A reading of the 173 page WB/OED Report, however, uncovers little empirical information on the results of the World Bank's more than US$16 billion in agricultural credit projects. Strong conclusions in the Report are often based on flimsy, ambiguous, or contradictory data (see Appendix I).

Term Lending

The World Bank has specialized in promoting term lending, that is, loans with repayment periods that extend over several years. The general lack of term loans, especially for agriculture, has been used as justification for this emphasis. Although often not stated explicitly, one might also expect that these World Bank credit projects would enhance the ability and willingness of formal lenders to expand term lending over a sustained period.

Measuring the extent to which World Bank projects induced the lengthening of the term structure of loans should be easy. The most elementary method -- one that focuses on gross changes -- would be to document the term structure of loans made by a lender before participating in a World Bank-funded project and then to look at the term structure after the project. A more comprehensive method -- one measuring net changes in the overall financial

system -- would be to analyze the term structure for the entire formal financial market and document the amount of term lending that was done for agricultural purposes before a World Bank project and then later measure the changes in this after the Bank's project.

Even in cases where the World Bank's efforts have lead to a net increase in agricultural term lending, results are subject to the counter factual challenge. What would the formal banking system and the government have done about term lending for agricultural purposes in the absence of the World Bank's credit project worth, say $100 million? For example, would the government have recognized the importance of additional term lending for agriculture to the tune of $100 million in the absence of World Bank assistance? If so, the World Bank's funding may substitute for what the government would have done, thus allowing the government to exercise fungibility and increase its funding for other purposes -- such as education -- to the tune of $100 million. It is essentially impossible to know with certainty what participants would have done without a project. The dynamics of donor/government negotiations that are part of foreign assistance result in most donor projects being involved in a significant proportion of substitution for what would have occurred without outside assistance. Otherwise, donors are funding activities that would attract zero interest on the part of domestic participants without donor participation, a result that any self-respecting government would strongly resist.

The WB/OED Report presents no information documenting the extent to which World Bank efforts have been successful in making net or gross additions to term lending for agricultural purposes in any country for any project. The author of the Report makes only one undocumented comment that, "The terms for many of the term lending lines turned out to be shorter than the Bank had anticipated at appraisal" (4.6). It is thus impossible to make any informed judgement about the effect of World Bank projects on term lending. In the absence of data, skeptics might claim that World Bank attempts to expand term lending for agricultural purposes through DCP projects had no measurable effect on the term structure of agricultural loans, otherwise some evidence would have been presented in the WB/OED Report. Many of the traditional agricultural development banks that were participants in World Bank projects have since been closed, are essentially moribund, or suffer serious financial difficulties. As a result, one might speculate that term structures have shortened as a result of these events.

Overall, the WB/OED Report fails to substantiate that World Bank projects aimed at lengthening the term structure of agricultural lending achieved this objective. The Report is devoid of information that would allow one to draw informed conclusions about this issue. With the information presented in the Report, one cannot even be sure that the nearly 700 World Bank agricultural credit projects were generally associated with an overall increase in the real amounts of agricultural lending -- short, medium, or long-term.

Capital Investments

Since many of the World Bank's projects focused on stimulating farm investments, one might expect an evaluation of these efforts to be laced with examples and information showing that

World Bank programs had been associated with such investments. Unfortunately, the Report does not provide any systematic data that allow readers to draw independent judgments about the extent to which World Bank agricultural credit projects were associated with farm-level increases in capital investments. Bangladesh is mentioned several times as a success story, but without supporting information (e.g., 3.27; 4.51; 7.3). However, even if this type of information had been provided, it would have been subject to the attribution problem, the substitution problem, and the counter factual problem, all mentioned earlier.

Readers of the Report must take on faith that project PARs and PCRs measured these increases in on-farm capital in arriving at their overall project evaluations. Unfortunately, the Report leaves readers in the dark on techniques and data used in the PARs and PCRs to arrive at overall project ratings. The lack of concrete information in the WB/OED Report on increases in on-farm capital may suggest that this type of data was missing in the primary documents used in the study.

The statement that, "The Bank-supported programs can easily demonstrate their relationship with...capital deepening," (4.58) is firmly asserted, but not supported with any systematic empirical information anywhere in the Report. Instead, there are off-hand comments about tubewells in Bangladesh and Yemen, greenhouses in several Mediterranean sites, and dairy and tea activities in Kenya. Since the author of the Report is an ardent DCP supporter, readers may wish for more than the author's authority to validate these claims.

Scraps of information in several places in the Report suggest that substitution and diversion are prominent in at least some World Bank-funded credit projects. The 1976 OED study of five agricultural credit projects estimated that 40 percent of the funds lent were diverted to uses other than those originally specified in the loan documents, or substituted for other funds (p. 6). "A 1991 study by...[the World Bank] of the Chinese credit program reports diversion of up to one-third of the funds for production loans to consumption purposes" (4.81). The WB/OED Report is mute, however, on how these levels of substitution and diversion affected the impact of World Bank credit projects.

Production Increases

Because of fungibility, measuring the impact of credit use on farm activities is often naive. Product prices, input availability and prices, and technology may be far more important determinants of farmer behavior than is credit and its price. In most cases, the strongest statement one can make about the relationship between credit use and on-farm activities is that they are, or are not, closely associated. In some countries, the flows of remittance from overseas into rural areas may be much larger than are the flows of directed credit into the countryside -- Bangladesh, Egypt, El Salvador, the Philippines, and Pakistan being examples. Under these circumstances, and given the fungibility of money, one is skating on thin ice in attributing farm-level changes to relatively small flows of directed credit. Unfortunately, the WB/OED Report is silent on this, except to dismiss the fungibility issue in a footnote (p. 51).

Stretching the term structure of agricultural loans and increasing the amount of on-farm equipment is only useful in achieving the third objective of the World Bank's projects if these changes can be tied to increases in farm production. In extreme cases, tractors may be purchased but diverted to road construction or held as inflation hedges. Wells and pumps may be installed and then not used because energy prices increase or water tables drop. Likewise, small motors purportedly purchased for water pumping purposes may be modified and diverted to propel water taxis.

Studies that attempt to measure production increases caused by borrowing are subject to the attribution and counter factual challenges discussed earlier. Supporters of the DCP have correctly noted that substantial increases in the volume of agricultural credit in some countries are positively associated for a time with increases in farm output (4.58). Critics of the DCP can counter with examples where the real amounts of formal agricultural credit have declined sharply over a period of time in a country while overall agricultural output continued to increase, Brazil, Peru, the Philippines, and Sri Lanka being examples.

The author of the WB/OED Report mentions several questionable fragments of information to support his favorable conclusions about the impact of credit on farm production:

- The first are rates of return estimated from farm models. "These figures are mostly taken from ranges of estimates developed from a series of farm and firm models, instead of point estimates [empirical data]...if these data carry any credibility, they point toward a generally favorable on-farm [production] impact" (4.50).

- These were "...complemented by descriptive statements about the nature of on farm activity financed by the project, and occasionally by reference to the significance of the incremental production in national or regional terms" (4.52).

- "...a thorough reading of supervision files and visits to borrowing farmers...[allowed] the study...to reach a reasonably comfortable conclusion that production results were acceptable" (4.52).

- "The main problem with these impressions is that they lack the discipline of economic analysis: corresponding evidence that the sub-projects on the farms and firms were worthwhile as well as productive" (4.53). Because of data problems, "...the study is prevented from making definitive claims in this important dimension [production increases] of the credit portfolio" (4.53).

The only empirical study of credit impact cited in the Report was done by Bank staff on Indian data, but was not formally part of the WB/OED review (Binswanger and Khandker). "The conclusion of the study is that the relationship [between credit and crop production] is discernable but not strong: that the expansion of agricultural production fell short of what had been predicted" (p. 52).

The paucity of information on changes in farm output due to credit use in the WB/OED Report is not surprising given measurement problems. Still, it is disappointing that the Report fails to present any information on changes in output that were associated with World Bank projects. Were the substantial investments in pump sets and wells in Bangladesh, for example, associated with significant changes in output of crops that might have benefitted from supplemental irrigation? Was the financing of tractors in Pakistan associated with increases in production of crops that might benefit from more mechanization? Was there an increase in total palm oil production in Nigeria associated with Bank credit projects for this purpose? The Report is surprisingly silent on these types of questions. The tepid conclusion in the Report that, "...production results were acceptable" (4.52) is again based on the author's impressions (4.53) rather than on supporting data presented anywhere in the WB/OED Report.

The WB/OED Report is surprisingly weak on an issue that should have been one of its strengths: showing how World Bank funded credit activities were associated with increases in physical output. This silence is an indication that credit and output have an amorphous relationship such that measuring credit impact on output is not only difficult but also misleading. Credit is not a physical input, but is rather an enabling agent that expands the range of choices available to borrowers, including choices not targeted by planners of directed credit.

Institutional Strengthening

Of the four objectives, the WB/OED Report claims the least positive results for the institutional strengthening objective. The strongest statements the author presents in this regard are that the ***image*** of most of the lending institutions with which the Bank has worked, "...is very good (5.33); and, "...[that the World Bank's credit projects] have had a substantial, visible and appreciated impact on the capabilities and influences of the executing agencies" (7.7). The collapse of client banks and atrocious loan recovery performance in numerous programs (e.g., Bangladesh, India, Mexico, Peru, and the Philippines) are glossed over in the Report.

Readers might expect the author of the Report to support his conclusions by presenting financial information such as solvency, loan recovery rates, earnings, capital adequacy ratios, degree of dependence on subsidies, and number of institutions that have collapsed or closed. As is the case throughout the WB/OED Report, the author laments the lack of information to support his points: "Most of the reports [PARs and PCRs] gave little information [on delinquency and default] and when they did it was unsystematic" (5.1). "...due to the lack of data at the PCR and PAR level, tables showing conventional financial accounts and ratios were not prepared for this [World Bank/OED] report" (5.48).

A skeptic might come to the conclusion that many of the World Bank's agricultural credit projects have been associated with destruction or serious weakening of rural lenders. This includes the Agricultural Development Bank in Peru -- the World Bank's first directed credit institution -- a number of the rural private banks in the Philippines, and agricultural development banks in francophone countries in Africa. Serious loan recovery problems and

government and donor fatigue with poor results can be noted in a number of other countries where the World Bank had major agricultural credit programs that were not continued (5.5).

The WB/OED Report downgrades the importance of previous performance that was disappointing and assumes that future results will improve (5.9). This includes downgrading the importance of recovering loans (5.12). There is a disturbing underlying assumption that runs throughout the WB/OED Report that giving a person or firm a single loan will solve most of the borrower's problems. The value of having a sustained relationship with formal finance, either as borrower or saver, is missing in the Report. Financial infrastructure is treated as a disposable item.

Overview of the WB/OED Report

The WB/OED Report is laced with impressions, feelings, suggestions, and hints. It is virgin with respect to systematic empirical data to support the conclusions drawn. In the end, the mountains of paperwork spawned by the World Bank's directed credit programs did not allow the largest and most sophisticated donor to marshall more than scraps of information and a few anecdotes to document the effects of more than $16 billion in development assistance. This lack of useful information is evidence of the flaws in the DCP. The basic assumption behind directed credit is that planners have superior knowledge about who should receive loans compared to the operations of the invisible hand of the market. One wonders about the superiority of that knowledge given the breakdown in DCP information systems -- demonstrated by the WB/OED Report -- that are supposed to nurture this superior knowledge.

Despite its major flaws, the WB/OED Report is a valuable document, not because it proves the superiority of the DCP over the FMP, but rather because it provides a comprehensive collections of arguments that are commonly used to reanimate the DCP and to postpone adoption of the FMP.

VI. STIGLITZ, WEISS AND IMPERFECT INFORMATION

Since the early 1980s, numerous economists have focused on information problems in financial markets, and a few have concluded these difficulties provide support for the DCP. A widely-cited article by Stiglitz and Weiss on credit rationing, published in 1981, has sparked substantial work on this topic.[12] In several respects, Stiglitz and Weiss span the old and new paradigms. On one hand, they emphasize market imperfections -- those involving information -- thereby reinforcing a major theme in the DCP. On the other hand, they stress the importance of information, a major component of transaction costs, which is a primary theme in the FMP. Stiglitz and Weiss is one of few references used by proponents of both paradigms to support their views. Most of the users, however, have been DCP advocates who interpret the work

[12]For a sample of additional literature on this topic see: Aleem; Besley; Fry; and Hoff and Stiglitz.

associated with Stiglitz and Weiss as providing support for intervention in credit markets, including interest rate controls. The purpose of the following discussion is not to question the logic of Stiglitz and Weiss but rather to examine the implications of their work for understanding the functioning of credit markets in developing countries and especially the extent to which their arguments in fact support the DCP. Substantial research during the past 15 years, much of it involving Stiglitz himself, provides further refinements of Stiglitz and Weiss' initial insights that make them more germane for policy prescriptions.

The Argument

The basic argument presented by Stiglitz and Weiss is that, with free markets, some creditworthy individuals and firms may be credit rationed. That is, some creditworthy individuals receive loans that are too small to exploit fully their economic opportunities or are unable to obtain any loans. The primary explanation for this is information asymmetries; lenders have less information on the ability and willingness of potential borrowers to repay loans than do the borrowers themselves. Acquiring more information on relatively unknown clients that would allow the lender to do more informed loan screening may be perceived by lenders as being too costly relative to possible benefits. Lenders may also feel that lending to these relatively unknown clients will involve excessive costs to assure that borrowers use loans properly -- the incentive problem -- and to compel borrowers to repay -- the enforcement problem (Hoff and Stiglitz).

Stiglitz and Weiss argue further that lenders are limited in their ability to overcome the inefficiencies resulting from asymmetric information by using higher interest rates or by increasing collateral requirements. Using higher interest rates to ration loans will attract an increasing proportion of borrowers with high risk projects or borrowers who have little intention to repay. In addition, high interest rates on loans lessen the net income of borrowers, thus reducing their ability to repay. Likewise, increasing collateral requirements to screen loan applicants may result in loans that are less than optimum in size for borrowers, thereby making these loans more prone to repayment difficulties. Stiglitz and Weiss conclude that unfettered financial market are unable -- because of this credit rationing -- to assist all producers in equating their marginal returns from investments, thereby causing inefficiencies.

Stiglitz and Weiss say little about how to overcome these inefficiencies. Their primary objective was to show that unfettered market operations do not lead to fully efficient resource allocation, not how to overcome the inefficiencies resulting from information problems in financial markets. Supporters of the DCP have argued that directed credit, interest rate controls, and overall increases in the supply of funds for lending are the best methods for ameliorating these inefficiencies. Proponents of the FMP, in turn, argue that their paradigm is more appropriate for addressing the problems identified by Stiglitz and Weiss.

In our opinion, the support that Stiglitz and Weiss provides for either of the two paradigms turns primarily on the issues surrounding information imperfections and the costs involved in dealing with these imperfections. Among the aspects of this that are also of particular

importance for the two paradigms are the number of transactions between client and lender, the usefulness of market interest rates, the relevance of various types of information for loan recovery, and the usefulness of collateral.

Information and Associated Costs

The Stiglitz and Weiss article focused attention on the crucial role of information in the on-going development of the FMP. The problem of adverse selection in particular helps to emphasize why lenders cannot simply offer loans at some rate of interest that they estimate to be an equilibrium (or several such rates for different borrower categories) and then wait for borrowers to arrive, but must rather concentrate on developing innovative, low-cost approaches to obtaining information about potential borrowers. There are three key aspects of information that are distinguished and emphasized within the FMP: (1) information is costly, often quite costly, especially relative to the size of loans typically sought by neglected, would-be borrowers in developing countries; (2) information has the characteristics of a public good, as its use by some economic agents does not diminish its availability to others; and (3) as emphasized by Stiglitz and Weiss, information imperfections have specific, major implications for credit markets.

High costs of information are most strongly reflected in the elevated transaction costs facing lenders who attempt to deal with small-scale, new borrowers. Understandably, the predominant lenders in most developing countries, commercial banks, are uncomfortable with this market niche. Their corporate culture makes it difficult for them to distinguish good borrowers from bad ones within the mass of small-scale farmers and microentrepreneurs who may wish to become their clients. The FMP -- and economic theory in general -- provides no rationale for government intervention just because costs are high. Nonetheless, it does suggest that formal financial markets may be slow in incorporating new, small-scale borrowers unless commercial banks can develop innovative approaches to deal with such potential borrowers.

The public good aspect of information means, in this context, that too little information will be developed and used by individual lenders because each lender cannot capture all the benefits. Such information includes innovative techniques for developing and processing information about small-scale economic agents, who are the most numerous among potential but neglected borrowers in developing countries. This can provide a rationale for government intervention, and the FMP does admit the potential usefulness of limited subsidies to encourage the development of innovative lending techniques (and institutions) and their diffusion. However, this is not the form taken by traditional DCP programs. It should also be noted that private markets themselves have incentives to create mechanisms to internalize the externalities of public goods, and in the case of information for financial markets they have done so, for example, through the creation of credit bureaus and rating agencies.

Adverse selection arises out of information asymmetries wherein the lender does not have as much information as the borrower. Such information encompasses a wide array of characteristics of a potential borrower and the economic activities available to this borrower,

but perhaps the most important element -- or at least the element under which the other characteristics can be subsumed for analysis -- is whether the borrower intends to repay. Although this contribution of Stiglitz and Weiss has been useful in stimulating the development of more sophisticated versions of the FMP, it does not appear to provide a basis for recommending programs of directed credit, as DCP proponents often suggest. In fact, the approach to information subsumed in the DCP would appear to be at variance with Stiglitz and Weiss's basic arguments concerning the importance of information.

The DCP Approach to Information

For directed credit programs, what is important is information about: (1) whether clients fall into prescribed beneficiary categories; (2) whether the activities carried out are the prescribed ones; and (3) whether these activities are carried out in the prescribed way. For directed credit programs, the collection, organization, analysis and subsequent transmission and storage of information concerning potential borrowers are focused not on the likelihood that these individuals eventually will repay possible loans but rather on whether these individuals have the characteristics designated in the program. Furthermore, directed credit programs typically require similar processing of information with respect to the activities undertaken by borrowers and even the manner in which these activities were carried out. While such information collection and processing is at the heart of the DCP, the FMP questions whether the information required by directed credit programs enhances or detracts from the information required to promote loan recovery and hence the viability of lenders.

The additional information that lenders are required to have about individuals to determine if they can qualify as beneficiaries under directed credit programs cannot contribute in a cost effective way to the selection of borrowers most likely to repay. Lenders that are concerned about their ultimate survival are obviously looking for borrowers most likely to repay, balanced against the transaction costs incurred and the interest and fees that can be earned. Prescribing characteristics for borrowers and their activities could at best only duplicate what such lenders are already looking for, in which case the characteristics prescribed in the directed credit program would be irrelevant. Otherwise, collecting and processing information about the characteristics prescribed in directed credit programs is just adding to lender transaction costs without improving loan repayment enough to compensate for the added costs.

Assuming that under the DCP participation in directed credit programs is obligatory, lenders are faced with three options: (1) continue lending to the same types of borrowers as before but reclassify these borrowers according to the characteristics prescribed by the program; (2) lend to the prescribed target population using existing techniques to select borrowers (perhaps hoping that the government will ultimately be forced to cover the increased costs of non-repayment); or (3) lend to the prescribed target population using new, innovative techniques to select from that population the borrowers most likely to repay. The third option is clearly what is contemplated under the DCP, but this assumes that new, more cost-effective borrower selection techniques in fact exist and can readily be implemented. If this were true, then it should be possible for DCP advocates simply to demonstrate these innovative, cost-reducing

techniques for selecting from the target population borrowers with the best repayment potential, in which case compulsory directed credit programs would be unnecessary.

Information Costs of Monitoring and Evaluation under the DCP

Even if directed credit programs do not lead to the selection of borrowers who are less likely to repay, and the costs of collecting and processing information are not increased in the process of dealing with these new types of clients, information costs will nonetheless increase because of the costs associated with monitoring lenders to ascertain that their clients in fact fall within the target group. For monitoring purposes, lenders will have to incur the costs of collecting, processing and transmitting information with respect to the characteristics of borrowers that has nothing to do with the likelihood of loan repayment, but rather is required to demonstrate that borrowers fall into the target group for the directed credit program. The situation becomes more complicated if, instead of targeting borrowers, the directed credit program targets the types of activities to be undertaken and the techniques to be used in carrying out these activities. In such cases, not only is the type of information changed from information about clients to information about activities, but relationships are also changed from one in which only the lender is monitored to one in which the borrower must be monitored as well.

In the case of client targeting, it may at times be necessary for program officials to visit clients to see if they conform to the information supplied by the lender. In the case of activity targeting, it might initially seem that the lender need only monitor the borrower to determine if the designated activity has been carried out in the designated way, but in fact program officials will need to monitor both the lender and the borrower closely. The borrower is being required to undertake an activity that has a lower rate of return than some alternative activities, unless activity targeting is simply redundant, so that very close monitoring is required. Moreover, because of the lower rate of return on the designated activity than on these alternative activities, the lender will be less likely to be repaid if the designed activity is undertaken, so that the lender has no incentive to carry out this type of monitoring. Furthermore, if the lender, as is typical, is required to undertake remedial action if the borrower is found to be out of compliance, the lender is unlikely to act without strong participation by program officials because an otherwise congenial relationship between the lender and the borrower will be disturbed, thereby reducing the likelihood of repayment. Thus, in activity targeting, monitoring can become a costly activity not just for lenders but also for borrowers and for program officials.

Another attribute of directed credit programs is the requirement for evaluations. Governments and international donor agencies that fund directed credit programs logically must demand that these programs be evaluated according to the criteria by which credit is directed; otherwise, there could be no justification for the costs incurred through these programs. Not only must evaluators know if additional designated clients were reached with loans who would not otherwise have been reached but also if designated activities were carried out and whether these activities might have been carried out even without the directed credit program. As indicated in our earlier critique of the DCP, such information requires intimate knowledge

of both lender and borrower behavior under both actual and hypothetical circumstances, which would not only be extremely costly for program officials to obtain but would also imply costly impositions on both lenders and borrowers. Moreover, the preceding examination of the World Bank's review of its directed agricultural credit programs provides no credible evidence that lending to targeted clients was increased over what it otherwise would have been or that the output of particular products or the use of particular production techniques was promoted. There is nonetheless evidence that enormous amounts of information were collected and processed, so that significant additional costs were undoubtedly incurred under the DCP approach. Moreover, since the substantial amounts of information that were collected and processed as part of directed credit programs were inadequate for evaluation purposes, it would be difficult to conclude that they could have been useful for monitoring or loan screening purposes.

Implications of DCP Information Requirements for Centralization

Suppose that implementors of directed credit programs are willing to cover the costs of monitoring and evaluation described above and that, because of the subsidies involved, borrowers and lenders are likewise willing to accept the costs and inconvenience of being monitored and evaluated in detail. Proponents of the FMP would nonetheless argue that lenders participating in directed credit programs are likely to suffer significant decreases in viability. Even if participating lenders are able to manage increases in loan non-repayment often associated with the DCP, they will experience increases in costs due to collecting and processing the information required to identify the types of beneficiaries designated in directed credit programs and to insure that the designated activities are carried out by these beneficiaries. Even if directed credit programs provide subsidies to cover the direct increases in lender information costs involved in selecting, monitoring and evaluating, proponents of the FMP argue that there are likely to be substantial increases in indirect costs that are not covered -- specifically, a "crowding out" of the types of information that lenders require to function efficiently in borrower selection and loan recovery. One example sometime cited in the FMP literature is the increased centralization that accompanies directed credit and the changes in the types of information that flow between head and branch offices.

For successful urban microenterprise finance programs and for successful rural lending as well, FMP proponents have emphasized that it is necessary to have loan officers in close proximity to borrowers and to have over-all staffs in field offices small to keep loan recovery rates high and costs low. Furthermore, these loan officers must have as much responsibility and autonomy in decision-making as possible, especially in client selection, but tempered by adequate lender internal audit capabilities to control possible self-dealing by loan officers. As FMP proponents point out, loan officers could not individually have at their fingertips the mass of information required to implement directed credit programs, especially when there are a significant number of different program, something that appears inevitable once the DCP has been adopted. Directed credit programs thus imply larger and more complicated field offices with higher costs than is necessary for optimal borrower selection and loan recovery, and/or a much greater degree of centralization with loan applications sent to the head office for approval

against the criteria of different directed credit programs and the amounts of funds available in each program.

Centralization not only implies delays in loan approvals and disbursements -- key attributes of successful lending programs, especially for microenterprises and small-scale farmers -- but also the transmission of volumes of information from the field about two distinct sets of attributes of potential borrowers: (1) how likely they are to repay their loans; and (2) whether they fit the criteria of the various directed credit programs. FMP proponents have frequently pointed out that the first set of attributes, especially for small-scale borrowers, is quite difficult to convey to a centralized loan committee -- one of the main reasons that successful micro-lenders are decentralized -- whereas the second set must have been designed with readily identifiable approval criteria in mind for the directed credit program to have some chance of success. It is thus likely that the second set of criteria will predominate in client selection, with adverse affects on loan recovery. Although local loan officers may begin to merge the two types of information in ways that promote approval of applications from clients deemed more likely to repay, the loss of autonomy for local loan officers makes it difficult to assign responsibility ex-post for loan recovery performance, thereby further promoting loan recovery deterioration.

As the earlier critique of the DCP points out, many directed credit programs have had poor loan recovery performance, and a variety of explanations have been given for this. However, only recently has the FMP begun to focus attention on the increasing volume and declining quality -- in terms of usefulness for loan recovery -- of the information flowing through lenders' systems. The increase in lender transaction costs under directed credit programs has been documented most fully by studies of transaction costs carried out by the Rural Finance Group at The Ohio State University. The first of these studies, of rural lending in Honduras, not only showed that lender transaction costs were much higher for the state-owned agricultural development bank but also that the main commercial bank studied had transaction costs as high as those of the agricultural development bank for its directed credit portfolio -- but not for its regular loan portfolio. Moreover, transaction costs were primarily incurred at the head office of the agricultural development bank and of the commercial bank for its directed credit portfolio but not for its regular loan portfolio.

Numbers of Transactions

An extremely important assumption in the Stiglitz and Weiss model is that there is just a single loan transaction between the borrower and the lender. Implications of additional transactions are considered only when the investment project financed is under-funded by the first transaction. The DCP likewise focuses on a single loan for a specific purpose. In contrast, the FMP emphasizes that loan repayment in developing countries is almost never based on the outcome of a single investment project because small-scale borrowers, as risk-adverse household firms, are inevitably engaged in a variety of activities -- no one of which looms too large -- and especially because repayment is largely conditioned on borrower expectations about future lender behavior. Indeed, both the borrower and the lender are interested in an on-

going series of transactions because past transactions are the best source of low-cost information on which to base future borrowing and lending decisions.

When the FMP addresses the issue of information in this light, it comes to the conclusion that the information contained in repeat transactions between borrowers and lenders is likely to be the lowest cost and the most relevant information to assess the likelihood of loan repayment. Commercial bankers worldwide typically speak of the importance of establishing on-going relationships with clients, rather than focusing on a single deal, thereby confirming the importance of a series of loans rather than the single loan transaction of the basic Stiglitz and Weiss model. In fact, it would be difficult to imagine financial markets and institutions existing and functioning without the crucial build-up of information that comes from relationships between borrowers and lenders through on-going series of loans. Moreover, the evolution of mechanisms in developing countries for successful microenterprise lending has everywhere been based on such an approach -- even when other aspects of successful approaches have varied widely -- as successful microenterprise lenders start small and gradually increase the size of loans to repaying borrowers.

In other writings, Stiglitz (1994) emphasizes that information developed through an on-going series of transactions between a borrower and a lender introduces another type of market imperfection -- a monopoly element -- because potentially competing lenders do not have as direct and inexpensive access to this information.[13] Nonetheless, both borrowers and lenders appear to find the development of these on-going relationships highly advantageous. They are found not only with formal financial institutions but also throughout the wide range of informal financial arrangements. Moneylenders rarely deal just once with a client; rotating savings and credit associations (ROSCAs) typically reform after each cycle with largely the same membership. Multiple relationships are similarly seen as advantageous for developing information. In formal finance, commercial banks lend more readily to their depositors, while in informal finance, marketing agents typically provide credit to their long-standing clients based on the information obtained from these marketing relationships. DCP proponents see monopolistic exploitation in these relationships, while FMP advocates see advantages from lower-cost and more reliable information -- and hence reduced transaction costs for both borrowers and lenders.

Interest Rates

With respect to interest rates, the main contribution of Stiglitz and Weiss, as already noted, is to point out that interest rates on loans will be set by lenders below market-clearing levels (and credit will therefore be rationed) because of asymmetric information and adverse selection. A main concern of the FMP has always been to free interest rates from government controls that maintain them below market-clearing levels. The DCP has typically advocated below-market interest rates to provide subsidies as part of the credit targeting process. On the surface, then,

[13] As noted above, market forces have attempted to deal with this imperfection through the creation of credit bureaus and rating agencies.

both the FMP and Stiglitz and Weiss would seem to agree that interest rates on loans can often be expected to be too low, although for quite different reasons, while the DCP fears that interest rates will be too high.

Recent experiences with financial sector reform have raised renewed concerns about free market interest rates being too high, not however because of the desire to use low interest rates to deliver subsidizes as in the DCP, but rather because of possible distortions accompanying financial sector liberalization that have sent interest rates far higher than what most observers think could be normal equilibrium levels. In this respect, the case of Chile in particular has been studied in depth. The Chilean case is especially interesting because the Chilean Government had brought its fiscal deficit under full control, so that underlying macroeconomic instability was not the cause of high interest rates, as it has been in a number of other liberalizing countries. Chile had also largely liberalized across the board, including especially major reform of its international trade regime. Some observers have attributed Chile's high interest rates to long lags in the adjustment of inflationary expectations, while others have focused on various areas where Chile had failed to liberalize sufficiently (e.g., labor markets) or had pursued questionable policies (e.g., fixing the exchange rate prematurely while allowing largely free international capital flows) to place Chile's high interest rates in a broader context. However, most observers have come to focus on inadequate banking supervision as the primary culprit.

Prudential regulation and supervision of financial markets and institutions is now almost universally accepted as an indispensable government activity, certainly by Stiglitz (1994) and by most FMP advocates as well. The basic argument is that there are too many externalities involved in the payments system and in protecting creditors of the financial system for the government not to intervene in this way. Moreover, because of the central bank's role as a lender of last resort in times of liquidity problems and because of prior bailouts of problem banks, governments have little credibility when they insist -- even strongly -- that they will not protect depositors and other creditors of banks. Thus, because of the implicit insurance that removes incentives for monitoring by depositors and other creditors, government regulators must supervise banks and certain other financial institutions so that they do not undertake excessive risks. In particular, financial institutions verging on insolvency have an incentive to pay whatever it takes to attract more deposits or other funds just to stay in operation and perhaps to try to recoup -- or to secure funds for owners and managers as they prepare to disappear. Without going into further details in the Chilean case with respect to risky loans and insider lending,, such behavior can readily explain high interest rates in Chile -- and provide a warning of the substantial losses that can accrue to a government and its taxpayers. As indicated above, Stiglitz and most FMP proponents would readily agree that prudential regulation and supervision should be among the government's highest priorities for the financial system, while DCP advocates might well give higher priority to the government's monitoring of directed credits.

Loan Recovery

At the heart of Stiglitz and Weiss is the point that market-clearing interest rates will lead to excessive loan recovery problems for lenders because of asymmetric information and adverse selection. Lenders will thus charge lower rates and ration credit to deal with these information imperfections and thereby attempt to bring loan recovery up to optimal levels. The issue to be addressed here is the extent to which the DCP approach can be expected to enhance loan recovery in this context.

An assumption in Stiglitz and Weiss is that borrower repayment behavior is mainly a reflection of the selection of some specific investment project and the outcome of the project. The DCP follows Stiglitz and Weiss in emphasizing the importance of individual investment projects for borrowers -- based on the assumption that fungibility can be overridden and that borrowers can be induced, or forced, to undertake the investment projects for which credit was directed. Nonetheless, it has been widely observed in developing countries that borrowers, especially small-scale ones, are highly risk averse, so that no single investment project is likely to dominate their portfolios, as they prefer instead to engage in a variety of diversified activities. Inducing borrowers to undertake relatively large investment projects, as the DCP generally proposes, may thus not be the best way to promote loan repayment.

Traditional empirical work on loan repayment -- asking defaulting borrowers why they did not repay -- has seldom elicited responses having to do with investment projects, but rather with external events such as sickness, death, plagues, and floods. Such answers are admittedly self-serving, but can a defaulting borrower be expected to answer that repayment did not really seem worthwhile? Nonetheless, more recent empirical research on loan repayment in the context of the FMP (see Christen and Vogel, for example) shows borrowers clearly weighing the costs and benefits of repaying against those of defaulting, with transaction costs, the possibility of future loans and the likelihood of effective sanctions weighing heavily in the balance. The DCP, on the other hand, does not appear to contemplate what aspects of lender service and the incentives involved in on-going relationships might make it more attractive for borrowers to repay loans promptly.

Suppose for the moment that directing credit to designated borrowers does not result in the borrowers ultimately selected having inherently worse repayment characteristics. FMP proponents would nonetheless argue that targeting is likely to impact loan repayment performance adversely -- even if targeted borrowers do not see themselves as special beneficiaries and thus under little pressure to repay. The FMP points to the typical case in which activities rather than borrowers are targeted. In this case, as pointed out above, there is no need to target unless the targeted activities yield lower returns than the activities that would alternatively be carried out by borrowers. Returns could be lower because potential borrowers are currently unaware of the targeted activities or of the most efficient ways to carry them out, but in this case the FMP points out that appropriate government interventions involve training, technical assistance, and demonstration projects to make potential borrowers aware of new activities and more efficient techniques, rather than directed credit. Returns could be lower because infrastructure and inputs are not adequately available or because prices of inputs and outputs do not accurately reflect market opportunities. In this case, the FMP notes that

appropriate government interventions would focus on infrastructure or input availability or on the impediments that prevent prices from reflecting actual market opportunities.

In the case most often argued by sophisticated DCP advocates, returns are lower on targeted activities because various externalities cause a divergence between private and social returns. In this case, tax-cum-subsidy schemes or other arrangements to increase the returns on the targeted activities are the most appropriate types of government interventions. Directed credit programs will otherwise be asking borrowers not to act in their own best interests and instead to select activities with lower returns to the borrowers themselves. As FMP proponents quickly point out, this will reduce the likelihood of lenders being repaid. Even if interest rates to borrowers are subsidized to compensate for the reduction in net revenues from undertaking activities with lower private returns, detailed monitoring and control efforts will be necessary, as discussed in detail above, because it will still be most advantageous for borrowers to undertake the activities with the highest returns to them.

Usefulness of Collateral

The contribution of Stiglitz and Weiss also poses the question of why lenders cannot solve the asymmetric information and adverse selection problems by requiring more collateral. The main answer of Stiglitz and Weiss is that heavy use of collateral presents a problem for resource allocation because the possession of collateralizable assets is not necessarily coincident with access to high-return investment prospects. An additional observation of many FMP proponents is to ask why lenders (and borrowers) use collateral when the collateralization and recovery process is typically so long, costly, complicated, and uncertain in most developing countries that lenders almost inevitably lose on a loan transaction when they collect through this mechanism. Lenders may nonetheless find the use of collateral worthwhile because the demonstration effect for other borrowers is such that the loss on the individual collateral recovery process is more than offset by improved recovery on other loans. In addition, as suggested elsewhere by Stiglitz, collateral and its use have important information attributes. As FMP proponents also have often pointed out, the availability of collateralizable assets and borrower willingness to put such assets at risk signals to lenders about a potential borrower's own assessments of eventual willingness and ability to repay.[14]

Overview of Stiglitz and Weiss

Stiglitz and Weiss have provided important insights into the functioning of financial markets and their role in economic development, mainly that: (1) free markets do not necessarily result in a completely efficient allocation of resources; and (2) problems surrounding information and

[14]Consideration of collateral also suggests that asymmetric information may sometimes be on the side of lenders rather than borrowers. For example, the essential component for the success of a pawn shop operation is knowledge of the market for the goods pawned, about which the successful lender will have more information than the borrower.

its use by participants in financial markets are the main source of the imperfections. It was not the purpose of the original Stiglitz and Weiss contribution to take a definitive position on appropriate government interventions, but FMP and DCP proponents have nonetheless sought support for their positions in this important contribution. Our conclusion is that incorporating the issues raised by Stiglitz and Weiss has been highly useful in promoting the further development of the FMP, in particular: (1) viewing the information problem primarily as it relates to transaction costs; (2) recognizing that transaction costs are an important part of the costs of borrowing and may sometimes be more important than interest payments alone; (3) viewing financial intermediation as a process that includes borrowers, depositors, and financial intermediaries, rather than as a one-time event between a borrower and a lender; and (4) recognizing that the quality of service and the expectations of future relationships strongly affect loan recovery.

In spite of claims by DCP advocates, we find little support for directed credit programs in the contribution of Stiglitz and Weiss. In fact, the DCP appears to add to the types of information problems identified by Stiglitz and Weiss. Nonetheless, later contributions by Stiglitz (1994) do advocate the use of directed credit, based on four issues: (1) underdeveloped tax systems; (2) public financial institutions in East Asia; (3) the effectiveness of directed credit; and (4) economies of scope. We believe that the foregoing analysis provides adequate refutation of the effectiveness of directed credit and that the supposed economies of scope for lenders will be more than overridden by the information "crowding out" that we have described. Underdeveloped tax systems are indeed a serious problem for developing countries, but this issue has long ago received an extensive treatment by Harberger and various other authors in the context of inflation tax analysis -- with the conclusion, we believe, that taxing the financial system heavily is dangerous because of tax avoidance through the informal sector and off-shore. To this, the FMP adds all the problems surrounding fungibility that make it highly difficult to bend the financial system to the will of planners. As to East Asia, we find this beyond the scope of the present paper given the number of well-known books that already exist and that have stirred further controversy rather than leading to general agreement.[15]

VII. CONCLUSIONS

Switches in paradigms occur slowly and are accompanied by skirmishes between defenders of the old and proponents of the new. This is especially true in the case of the major paradigm change such as those involved in the DCP and the FMP. These paradigms differ in fundamental ways: in the way they define the primary problem; in the role they assign to financial markets in development; in how users of financial services are viewed; in the sources of funds handled by financial markets; in the design and use of information; and in the way activities are evaluated. The gap between these two paradigms is so great that it is impossible

[15]Stiglitz also mentions the importance of directing credit toward technology and toward exports. We would simply note the difficulty that government planners have in detecting and supporting new technology. As to exports, we recall how "elasticities pessimism" dominated thinking about trade reform until recently, since government planners (and likewise economists) had no idea where new exports opportunities might arise.

for those involved in development to compromise, in our opinion, by keeping one foot in the DCP and the other in FMP. The size of the gap is confirmed by the continued sharp exchanges between supporters of the two paradigms. These exchanges will continue until one of the groups conclusively proves the superiority of their model, or proponents of one school-of-thought retire. Documenting the favorable or unfavorable performance of the two paradigms, along with some theoretical guidance, will ultimately result in one paradigm vanquishing the other.

The FMP emerged because of the impression that the performance of many DCP projects was unsatisfactory. Loan defaults, subsidy dependency, insolvent financial institutions, the limited number of clients reached through the DCP, and the overall costs of programs associated with this approach caused some concerned observers to look for a more effective approach. An increasing number of observers have concluded that approach is the FMP.

Our overall conclusion is that the DCP lost its predominance because of design flaws. Furthermore, the DCP is inconsistent with the economic reforms being implemented in an increasing number of countries during the past few years. Directed credit is out-of-step with the enhanced reliance on the private sector and especially on the role of prices and markets in these economies. Given this, we feel it is inappropriate to resurrect the DCP.

APPENDIX I

STRONG CONCLUSIONS BASED ON WEAK DATA

The following is a collection of quotes on eight topics from the WB/OED Report that first lament data problems (D), but then present conclusions based on that information (C).

1. On concentration of subsidies

D1 "With the exception of the Mexico PAR, there is practically no evidence of this phenomenon [concentration of subsidies in the hands of the non-poor] in the PARs and PCRs for the set of 41 projects" (4.44).[16]

C1 "...these infractions [large farmers capturing most of the subsidy] were the exception, and the image of widespread abuse is misleading" (4.46)

C2 "...the ugly sides of both the rent-seeking and crowding [out] hypotheses do not find significant support in the portfolio of Bank credit projects of the 1980s" (4.49).

C3 "...the Bank's attempts to put a substantial share of its credit funds into the hands of these small commercial farmers has succeeded" (7.4).

2. Farm level production

D1 "Production...is the most difficult part of the analysis, due to the lack of hard data submitted by governments or [by] the supervision missions" (4.50).

D2 "The poor recording of production data reflects the generally poor performance of monitoring and evaluation activities" (4.61).

D3 "This is the objective [increased production] which has the weakest empirical validation" (7.2).

C1 "...the study was able to reach a reasonably comfortable conclusion that production results were acceptable" (4.52).

[16]It is unclear in the discussion cited if information was collected, but no evidence of concentration was found, or if no information was collected on the subject. Since no data are presented to support this point, one might assume no data were collected. The only scrap of empirical information in the Report that bears on this issue is found in an Appendix on Jamaica. That information shows that 13 percent of the borrowers received 60 percent of the total amount of subsidized loans. The 13 percent was made up of 16 large estates and six big companies (p. 159, 2.14).

C2 "The study is prepared to accept that the production impact of the project was satisfactory..." (7.2)

C3 "The almost unanimous opinion expressed in PCRs and PARs is that the credit projects had contributed to incremental increases in crop, livestock and industrial projects, usually above...appraisal estimates..." (7.2).

3. Numbers of farmers reached

D1 "...in this analysis the question was asked whether the credit program reached a significant proportion of the farmers in the strata that comprised the intended clientele. The word significant was loosely defined, and reflected qualitative impressions of the depth of present and potential penetration of these types of borrowers" (4.32).

C1 "...the banking systems are expanding in many of the Bank's borrowing countries, and increasing numbers of farmers previously without access to official credit are coming within their [participating banks] orbit" (4.28).

4. Loan recovery

D1 "Most of these reports gave little information [on loan delinquency and default] and when they did it was unsystematic" (5.1).

D2 "The PARs and PCRs provide no information on this point [loan rescheduling]" (5.15).

C1 "This study has revealed some grounds for optimism [about loan default]..." (5.9).

5. Institution Building

D1 "...the evaluative reports on [participating] bank performance [in the PARs and PCRs] are almost always poorly developed and unconvincing" (5.37).

C1 "...the image of these agencies is very good: the information suggests that 29 [of 41] would be rated outstanding or good..." (5.33).

C2 "With respect to institution capability and image, the effects of association with the Bank can be described as very successful" (7.7).

C3 "...the nominal financial strength of the [participating] institutions has been preserved" (7.9).

6. Financial Viability

D1 "...financial accounts of the lending agencies were not examined in any detail [in the audits conducted immediately before the OED study]. The PCRs generally do not provide full financial analyses either [of institutions handling World Bank credit programs]" (5.48).

C1 "Eleven of the 25 [participating banks]...are judged to have emerged from the projects in good shape" (5.42).

7. Farm investments

D1 "The present study is unable to confirm its assessment of generally positive results of the farm investments, either in financial or economic terms" (7.44,vi)

C1 "...the Bank's credit portfolio can be associated with the irrigation works, tractors and threshers supporting the spread of the Green Revolution in South Asia..." (7.3)

C2 "...capital deepening is part of the process of technological progress, and ...[the World Bank's] projects achievements are substantial" (7.3).

8. Resource Misallocation

D1 "In the absence of quantitative evidence, interviews with farmers, their friends, bankers, extension agents, and other informed people were designed to elicit as much subjective information as possible on the borrower's use of project funds and his alternative sources" (4.63).

C1 "On the whole, the misallocation threat seems from the perspective of the 41 projects to be relatively minor..." (4.74).

APPENDIX II:

LOAN GUARANTEE PROGRAMS

Loan guarantee schemes are popular in both high- and low-income countries. Their objective is to induce lenders covered under the guarantee programs to lend to individuals and firms they would otherwise not accept as clients. Despite the popularity of these programs, there is dispute about their effectiveness in overcoming two interrelated problems: supposed distortions or credit market imperfections; and the lack of formal lending to groups targeted by policy makers, such as small firms. We begin our discussion by providing background on loan guarantee programs, and move next to a discussion of financial market imperfections and the extent to which loan guarantees can be a solution to these problems. We then focus on the benefits and costs of loan guarantee programs, and conclude with a few lessons and suggestions related to loan guarantees.

Background

Loan guarantee programs have a relatively long history. They have been used in most high-income countries to stimulate lending for a variety of purposes, but most often to help small-business operators (Levitsky and Prasad). Governments and donors have also promoted hundreds -- possibly thousands -- of these programs in low-income countries. The primary assumption behind these efforts is that disadvantaged groups are unable to access formal loans because of credit market imperfections. Loan guarantee programs are thought to overcome some of these imperfections by allowing lenders to shift part of the loan recovery risk to the guarantee program -- risks that typically cannot be secured by collateral furnished by small and new borrowers. In large measure, policy makers see guarantee programs as collateral substitutes for disadvantaged borrowers.

Loan guarantee schemes are often part of a package of subsidized activities that operate under the Directed Credit Paradigm (DCP). Instead of attaching a subsidy directly to the loan -- as in directed credit -- loan guarantee programs focus on altering lender behavior by subsidizing loan-recovery risk. The loan guarantee covers part of the lender's risk of not recovering loans made to target groups. It is often further argued that, once lenders have experience with new clients covered by loan guarantees, these clients will later graduate to borrowing without subsidized loan guarantees: partly because borrowers learn how to obtain formal loans; and partly because lenders assemble sufficient information about these new borrowers to make loans to them later without special guarantees.

Unlike other forms of insurance, such as casualty and life, there are few cases where profit seeking organizations have voluntarily created insurance programs for loans. In almost all cases, these programs depend on subsidies to start and also to persist (e.g.: Rhyne; Riding). It also appears that risk pooling -- an important advantage of most forms of formal insurance -- is not a benefit that is widely claimed for loan guarantee programs in low-income countries. Rather, the targeted nature

of most loan guarantee programs is essentially at variance with risk pooling to the extent that those targeted are truly a group with important characteristics in common.

Although justifications of loan guarantee programs typically begin with reference to one or more financial market imperfections or distortions, there is rarely any detailed analysis along these lines (Meyer and Nagarajan). Rather, the discussion usually shifts to other types of reasons, including the assumption that small businesses are faced with a systematic lack of access to credit and, moreover, that the economy in general and the small business in particular would benefit from increased access to credit. Given the pervasiveness of this line of reasoning, it seems essential to address the issue of the effectiveness and efficiency of loan guarantees programs in providing additional credit access to small businesses, regardless of their justification.

Loan Guarantees and Credit Market Imperfections

Discussions of using loan guarantee programs to overcome market imperfections usually first note that there are a variety of imperfections that are said to affect credit markets. This alone, however, is not a justification for establishing a loan guarantee program, as there may be other interventions that are more appropriate. Alternatively, there may be no interventions that can overcome the imperfections noted in ways that would enhance welfare. One of the key issues is the cost of creating and maintaining the institutions that provide loan guarantees, and an aspect that is often overlooked is the possible importance of the additional transaction costs that may be imposed on the lending and borrowing parties by the insertion of an additional institution in the credit relationship.

In examining justifications for loan guarantee programs as remedies for possible credit market imperfections, it is useful to begin by reviewing briefly some general rules about interventions to increase welfare, three in particular. First of all, there must be a genuine market imperfection or distortion. The fact that it is costly per dollar lent to make small loans to small businesses because of various fixed costs of loan processing is not an imperfection -- though it is usually an unfortunate reality. It would be an imperfection if there were informational externalities or asymmetries, but these information problems must prevent small-scale borrowers in particular from obtaining access to credit if a loan guarantee program is to be justified as a device to assist such borrowers.

Secondly, the intervention that is chosen must be targeted as directly as possible to the perceived imperfection. If the imperfection is in another market, a credit market intervention will not be an efficient approach. If the problem is that public transportation is poor and small-scale borrowers do not own vehicles, a loan guarantee programs is a roundabout and inefficient intervention, and it would clearly be more appropriate to deal directly with public transportation problems. If the problem is that small-scale borrowers typically do not possess collateral that is acceptable to lenders, a loan guarantee program might be an appropriate intervention, but it is still necessary to show that this problem is an imperfection and that a loan guarantee program is the most effective and efficient remedy (e.g., compared to legal system reform or bank training).

Thirdly, there can be "second-best" arguments for interventions, including loan guarantee programs, but such arguments are difficult to sustain. It is still necessary to demonstrate that there is an imperfection, but it is now also necessary to demonstrate that the first-best remedy is not available. It is then necessary to show that a proposed loan guarantee program is indeed second best compared to other possible options. In addition, it is necessary to show that the second-best remedy is indeed welfare enhancing, especially since -- being only second best -- it will introduce other imperfections that are welfare reducing. For example, a loan guarantee program to offset legal imperfections that impede the use of mortgages involves additional transaction costs for participating borrowers and lenders plus the costs of financing the required subsidy that could be avoided by dealing directly with the legal shortcoming impeding mortgages.

With these three rules in mind, arguments for interventions in the form of loan guarantee programs can be more effectively reviewed. The argument most commonly encountered is simply that small-scale enterprises do not receive enough formal credit, either in proportion to their economically attractive opportunities or in proportion to what larger businesses receive. The underlying reasons for this are rarely addressed. In this case, one must take the preferences of economic policy makers as given and ask whether loan guarantee programs in fact add to the amount of credit (or number of loans) made available to small-scale borrowers. This is dealt with in the next section of this appendix.

As already noted, small size itself can be construed as a barrier to access to formal credit because of the fixed costs of loan processing. However, as also noted, this is not, in itself, an imperfection, so that more credit for small-scale borrowers will tend to reduce overall economic welfare because of the higher costs involved. Nonetheless, an argument could be made that innovations that would introduce new lending procedures to reduce the costs involved in dealing with small-scale borrowers will not be undertaken because a lender cannot capture all the benefits of developing and introducing such innovations because the innovations can readily be copied by others. Arguments of this type are sometimes found in attempts to justify interventions to promote microenterprise lending (e.g., grants and cheap loan funds for NGOs focusing on such clients). However, it is difficult to find such argument convincing given that profit-seeking formal lenders have not entered the microenterprise lending field in any significant way even after the demonstration of successful innovations in micro-lending by NGOs and state-owned banks.

Information

Externalities and asymmetries with respect to information are among the credit market imperfections most often cited to justify interventions (Stiglitz and Weiss). The externalities argument is straightforward: externalities arise because valuable information is costly to produce but almost costless to disseminate, so that not enough will be produced because the producer of information cannot capture all the benefits. Information is obviously an important component of lending decisions, so there is potentially a problem. However, credit bureaus and other types of rating agencies have arisen in the private sector on a profit-making basis to attempt to internalize this externality. How successful they are and under what conditions are interesting questions but beyond the scope of this paper. Nonetheless, it should be noted that loan guarantee programs do exist that are based on the idea of subsidizing initial loans through loan guarantees (e.g., Chile) in order to encourage the production of information about

borrowers who would not otherwise be served. This, however, would appear to be a second-best approach compared to a direct subsidy for the production and dissemination of information about borrowers. In addition, it would need to be shown that informational externalities affect small-scale borrowers disproportionately and that loan guarantees do in fact bring in additional small-scale borrowers (see below).

The asymmetric information argument -- basically, that borrowers will always know more about their ability and willingness to repay than lenders -- has been popularized by Stiglitz and Weiss to show that interest rate increases can lead to adverse selection (good borrowers will opt out) and moral hazard (more risky projects will be chosen) so that lenders may find it optimal to ration credit rather than increasing interest rates to their "equilibrium" levels. If credit is indeed rationed, it again needs to be shown that this affects small-scale borrowers disproportionately. In addition, the question has been raised of the crucial importance of the "single transaction" assumption of the Stiglitz-Weiss model. In practice, borrowers and lenders find it advantageous to engage in an on-going series of transactions. The building of credit relationships and the use of small loans to acquire information about repayment provide further examples of how for-profit institutions deal with potential externalities involved in information on their own without the need for subsidized external interventions. In addition, however, the literature on credit rationing due to asymmetric information often turns to the issue of collateral as a substitute for information -- which brings us to the market imperfection that is perhaps most frequently cited as the basis for loan guarantee programs for small-scale borrowers.

Collateral

Collateral is said to be the main barrier that prevents small-scale borrowers from accessing formal loans. There are two distinct, and perhaps inconsistent, arguments with respect to collateral. The first is that commercial banks and other formal lenders rely excessively on collateral. The appropriate remedy would then seem to be to train bankers to be better bankers, rather than creating loan guarantee programs. However, it is unclear where the imperfection is, that is, why bankers will not make these changes on their own to enhance their profits. This leaves aside the issue that supervisory agencies might require collateral in order to classify loans as fully performing, but this is similar to the issue of reforming the legal system discussed below. Two further considerations suggest that the problem is more complex: first, collateral is seen as a substitute for informational imperfections, but analyzing rates of return and cash flows brings us back to heavy reliance on information; second, collateral is expensive to constitute and difficult to execute, so that reliance on collateral to collect loans would most often not be cost effective. The willingness to constitute collateral may thus be foremost a signaling device that provides important information rather than a hook for collecting overdue loans.

The difficulties in constituting and executing collateral is, in fact, the basis for the second collateral-based argument for loan guarantee programs. On one hand, small-scale borrowers may simply have no assets and hence cannot provide physical collateral, or they may have assets that could be used as collateral, but imperfections in the legal system make it too costly or risky to use these assets as collateral. In the case of imperfections in the legal system,

correcting these imperfections is clearly the first-best option. However, there may be an argument for a loan guarantee institution in this case based on externalities in that lenders individually have little incentive to spend their own resources to work toward improvements in the legal system with respect to collateral that would benefit all lenders. In such a case, a loan guarantee program might be justified if it could be structured so as to internalize in a single institution all the costs and benefits of working toward improvements in the legal system with respect to the use of collateral.

If small-scale borrowers simply do not have any assets that could be used as collateral under any circumstances and, at the same time, the use of collateral is an effective and efficient approach to lending decisions, this does not represent an imperfection. Nonetheless, there could be room for loan guarantee programs, but only in so far as they provide effective and efficient substitutes for collateral. This implies that they must be profitable without subsidies and, given the profit-making opportunity, should be found in the private sectors of various countries. There are, in fact, few such examples, but nonetheless there are some. In the United States, for example, there are private institutions that provide guarantees for housing loans, and there are also private companies that provide guarantees for state and local government debt. When there are instances of risks that can be pooled for a profit, profit-making entities can be expected to arise to do this. Analyses of possible government interventions to create loan guarantee funds might well focus more on whether there are risks to be pooled and, if there appear to be, what is preventing the private sector from doing so.

As noted above, "learning-by-doing" is a justification that has sometimes been used for loan guarantee programs and, in fact, is often used for interventions of all types. An example of this that has recently become of some importance is the guarantee of loans from commercial lenders (e.g., banks) to lenders (e.g., NGOs) that specialize in lending to small-scale borrowers. Borrowing from commercial lenders such as banks might enable these specialized lenders to increase their outreach, but banks can be hard to convince that lending to such specialized lenders can be safe, given that most banks have themselves dismissed such small-scale lending as unprofitable. However, if guarantees of loans from banks to lenders that specialize in small-scale clients are to be justified through learning-by-doing types of arguments, there should be evidence that banks can be induced eventually to undertake such lending themselves -- or at least to lend to specialized lenders without guarantees. We do not know of any evaluations that show this, but it is certainly an area that merits further attention.

Transaction costs

Transaction costs are the last issue dealt with in this section, albeit briefly because they are discussed in more detail in the following section. The importance of transaction costs for financial intermediation is a topic that has only recently received major attention. This is because transaction costs are hidden in the actions of lenders and borrowers -- and likewise, of deposit institutions and savers -- rather than being explicit parts of financial contracts in the way that interest and other charges are. Nonetheless, transaction costs are a major part of the total cost of financial operations, especially when small, short-term loans are involved. Because of the focus on loan guarantees as a device to assist small-scale borrowers, transaction costs loom relatively large compared to interest. With respect to loan guarantee programs, the issue

is that another institution is introduced and hence additional sets of transaction costs are implied; the borrower must now deal with both the lender and the guarantor and, likewise, the lender must also now deal with both the borrower and the guarantor. Careful attention must be paid to these costs and to their distribution among the different entities involved with the introduction of loan guarantee programs in order to assess properly the overall costs of these programs, a topic to which we next turn.

Costs and Benefits of Loan Guarantee Programs

At least three important questions should be asked about loan guarantee programs in assessing their effectiveness and efficiency in reaching small-scale borrowers:

- Do these programs significantly alter lender behavior in desired directions?
- Are the costs of these programs less than their benefits?
- Could the resources committed to loan guarantee schemes be more effective in assisting disadvantaged groups if they were used in other programs?

Costs of loan guarantee programs

Three categories of costs accompany loan guarantee programs: the costs of setting up the program; the costs of funding the subsidy needed to energize and sustain the program; and the additional cost incurred by the financial system to run and to participate in the guarantee program.

1. Set-up costs

In many cases, establishing a loan guarantee program involves setting up a new organization, or a new office in an existing organization, to administer the program. Typically, donors or governments cover all or most of the costs of setting up these facilities. Offices, equipment, employee salaries and associated benefits, and the expenses of advertising the program to potential participants are major parts of these set-up costs.

2. Funding Subsidies

Most loan guarantee programs involve hefty subsidies either to set them up and/or to sustain their operations. The subsidies may come via grants or concessionary loans to establish the initial guarantee fund, or later to replenish the fund through additional grants or government transfers.

3. Transaction costs

In addition to the obvious costs incurred by the guaranteeing agency to operate its program, lenders and borrowers usually incur additional transaction costs to participate in the program. In extreme case, the guaranteeing agency may insist on receiving copies of loan documents on insured credits and then essentially duplicate the initial loan screening done by lenders. In some cases, borrowers of insured loans may be required to provide additional information to lenders beyond what is required for non-insured loans, and lenders usually have to prepare special reports on the portions of their loan portfolios

covered by loan guarantees. If lenders participate in several guarantee programs, reporting requirements are multiplied.

Lenders also incur additional transaction costs when they make claims for defaulted loans covered by guarantee programs. These transaction costs may be substantial in case of disputes with the guaranteeing agency and when the lender participates in several guarantee programs and is processing information manually. In some cases, the borrower is asked to pay for part of these costs through interest rate surcharges on guaranteed loans. In other cases, the guaranteeing agency may unilaterally decide not to honor its guarantee unless the lender has pursued all legal remedies against the defaulting borrower -- but the costs involved in doing this can be the main reason that collateral was not used in the first place.

Unfortunately, we were unable to find any evaluation of loan guarantee programs in low-income countries that carefully documented the costs of setting up, subsidizing, and participating in loan guarantees.

Benefits of loan guarantee programs

The benefits generated by a loan guarantee program are concentrated in the ***additional lending*** induced by the transfer of part of the lender's loan recovery risk to the guaranteeing organization. Both borrowers and society would benefit from the increases in net income realized by borrowers who were supposedly more severely credit rationed before the help provided the loan guarantee program.[17] Unfortunately, these increases in net income can only be proxied by loan recovery performance. Borrowers are more likely to repay loans that help them significantly increase their incomes. Additional net incomes can only occur if additional borrowers receive loans because of the incentives provided to lenders by loan guarantee programs.

1. Additionality

Loan guarantee programs are justified on the basis of altering lenders' decisions in directions favored by designers of the loan guarantee. The success of these programs hinges on the extent to which guarantees cause additional lending to targeted groups, additional meaning more lending than would have occurred without the guarantee. If the program causes additionality, subsidiary issues are the comparisons of the program's costs with estimated benefits, and whether or not similar benefits could be achieved through less expensive methods. In the absence of additionality, the subsidiary issues are mute.

[17]Some secondary social benefits may also occur in the form of additional taxes paid by borrowers, additional employment, and fewer government subsidies paid to successful borrowers. Some of these social benefits, however, are off set by secondary social costs. Production by a firm benefitting from a guaranteed loan may substitute for production by firms outside of the guarantee program. These other firms -- as a result -- may pay fewer taxes, employ fewer people, and be forced to rely more heavily on other government subsidies.

Additionality is often poorly measured, or ignored, in evaluations of credit guarantee programs. In most cases, the number of borrowers covered by the guarantee and the total value of their guaranteed loans are used as an estimate of program benefits. These numbers likely overstate, however, the impact of loan guarantees on lender behavior. In evaluating the merits of loan guarantees from this perspective, the primary question to be answered is an empirical one, not one of theory: did the guarantee induce lenders to augment targeted lending and, if so, by how much? Additionality might be expressed either in terms of number of clients, number of loans, or in terms of volume of funds lent for targeted purposes.

Simple examples may clarify the notion of additionality. Assume the purpose of a loan guarantee program is to stimulate lending to microenterpreneurs. Further assume that before the availability of the guarantee, lender X was making loans to ten microentrepreneurs for a total of $1,000. If, after participating in the loan guarantee program, lender X lent to twenty microentrepreneurs for a total of $2,000, one could conclude that the loan guarantee was ***associated*** with additionality in both number of loans and value of loans made to the target group. Additionality might likewise occur when another lender Y, who initially made no loans to small businesses, later lent a total of $1,000 to ten small businesses under a loan guarantee. Measurement of additionality and attributing it to a loan guarantee program is difficult, however, because of counterfactual and substitution problems.

2. Counterfactual

It is impossible to know with precision what the lender would have done in the absence of the loan guarantee program. This is an event that did not occur and is therefore impossible to measure. One might argue that both types of lenders, X and Y, mentioned in the example above would have increased their lending to microentrepreneurs by the same amounts without the loan guarantee. Reforms accompanying the loan guarantee program, for example, that created an economic environment more hospitable to microenterprises might have induced both types of lenders to expand microenterprise lending without additional guarantees. One must be careful in attributing all changes in lending behavior to loan guarantees schemes when the guarantee program is nested in a bundle of programs that are improving the environment for a targeted group or activity.

There are two subjective ways to deal with the counterfactual issue: the first is to ask lenders, ex ante, what they would likely do regarding targeted lending with and without a loan guarantee. The other alternative is to ask the same question of participating lenders ex post. Both alternatives are vulnerable to the Hawthorne Effect: lenders' responses may be influenced by what they think the interviewer wants to hear. The lender's response is likely to overestimate additionality, especially when access to future subsidies appended to loan guarantee programs depends on positive and optimistic responses by lenders.

3. Substitution

Measuring the impact of loan guarantees on lender behavior is further complicated by two types of substitution: that which occurs within the lending institution and that which

occurs among lenders. A loan guarantee program may, for example, cause a bank to transfer part or all of the qualifying portion of its existing loan portfolio to the guarantee programs, and then expand its lending in non-targeted areas. We term this intra-portfolio substitution. This might include making multiple loans to individuals in order to fit them under a loan-size ceiling specified in the loan guarantee program, or redefining the purpose of existing loans to qualify borrowers for the loan guarantee. Large amounts of this type of substitution can substantially diminish additionality, and this is especially likely to occur when the objectives of the loan guarantee are perceived by lenders to be unprofitable activities. If lenders are under political pressure to expand lending targeted by loan guarantee programs, they are likely to comply by shifting some of their exiting borrowers -- perhaps those perceived to be the most risky -- to the loan guarantee and add only a few token new borrowers as window dressing to demonstrate that they are responding to political priorities. Whether or not the lender sustains this token lending after political concerns shift elsewhere is problematic.

The second form of substitution that occurs is among lenders, inter-lender substitution. For example, one non-governmental organization (NGO) may have access to a loan guarantee program that allows it to provide loans on a more favorable basis to borrowers than is possible for other lenders to do, including informal lenders and other NGOs. The NGO subsidized through the loan guarantee may, as a result, draw borrowers from these other lenders. If all of the borrowers covered by a loan guarantee program were previously clients of other lenders, little or no additionality in number of clients might result from the guarantee when net changes in the entire financial sector are considered.

One should expect significant amounts of both types of substitution to occur, so that the numbers of borrowers who are covered by a loan guarantee may substantially overestimate the amount of additionality caused by the guarantee program.

The problems of substitution and the counterfactual could lead casual observers to conclude that a credit guarantee program had a major impact on lender behavior when, in fact, the guarantee caused little additionality in lending for targeted purposes. Several studies in Canada and in the United Kingdom suggest that loan guarantee programs there resulted in only one-quarter to one-third of the clients covered by the guarantees being additional (Riding).

Given the difficulties of measuring additionality, it is not surprising that few evaluations of loan guarantee programs present information on this vital measure of performance. We have been unable to find any evaluation of a loan guarantee program that correctly documents -- in our opinion -- additionality. Explanations of this include: either that little-or-no additionality occurred; or that it can not be measured. Both explanation weaken claims made by advocates of loan guarantees. Lacking evidence showing loan guarantee programs caused additionality, it is impossible to determine the benefits of these programs. Skeptics might go on to argue that only the costs of these programs can be determined with any precision.

Lessons and Suggestions

Four critical features stand out in our review of loan guarantee programs. The first is that the assumptions about credit market imperfections -- on which loan guarantee programs are often built -- and the design of these programs are seldom logically related. The second is that virtually all of these programs, at least in low-income countries, involve subsidies. The third is that most evaluations of these programs report only part of the associated costs, including the subsidy component. The fourth is that benefits of these programs are seldom documented, and additionality is never accurately measured. Claims for various types of secondary benefits are not convincing without this type of fundamental information. With only scraps of information available about costs and even skimpier information on benefits, it is impossible to make informed judgements about the relationship between benefits and costs of these efforts.

Compared to the subsidies attached to cheap credit, the subsidies involved in loan guarantee programs do not lessen the incentives that participating intermediaries have to mobilize voluntary deposits. In this respect, loan guarantee programs have a more benign influence on financial market performance than does subsidized credit, the heart-and-soul of the DCP. Whatever the benefits and costs of loan guarantees, they clearly do less damage than providing lenders with cheap funds. At the same time, however, loan guarantee schemes impose additional transaction costs on financial markets that are similar to those caused by directed cheap credit.

Where to from here?

It is impossible to arrive at definitive conclusions about the effectiveness of loan guarantee programs until more careful and comprehensive evaluations are done. There is too little information available on these schemes to determine their costs and especially their benefits. Perhaps the most efficient way of doing this would be to evaluate carefully the performance of a handful of current schemes that are nominated by their designers and implementers as being successful (for example, see Stearn). The results of such a study would likely provide an upper bound on the performance of all credit guarantee schemes. If the costs and benefits of the projects that are thought to be most successful are found to be unfavorable -- or are impossible to document -- then it is likely that the performance of schemes whose designers and implementers are unwilling to brag about their projects would be even less impressive. We propose the following list of questions as suggestions for questions that might be addressed by such evaluations:

- What are the specific credit market imperfections that the loan guarantee addresses? How did the loan guarantee scheme overcome these imperfections?

- What were the costs of the program including the costs of setting up the third party to administer the guarantee, the subsidy involved in setting up or sustaining the operation of the program, and the additional transaction costs imposed on the borrowers and lenders who participated in the program? To what degree is the program subsidy dependent and is this increasing or decreasing? Who pays the subsidy and what is its distribution among the participants?

- Was the loan guarantee scheme associated with additionality in lending to the target group? This should include measures of number of borrowers, amounts of money lent, and changes in term structure of lending. The estimates of additionality should be net of intra-portfolio substitution by each participating lender, as well as inter-lender substitution.

- If the scheme is associated with additionality, then questions can be asked about the effectiveness of loan guarantee programs compared to other alternatives that might be used to assist the targeted group.

- If the scheme is associated with little or no additionality, questions can also be asked about possible changes in design that might enhance the performance of the program. The lack of additionality might be cause for policy makers to abandon loan guarantee programs if design changes do not look especially promising.

A wise man once said that: "When you cannot measure it, when you cannot express it in numbers your knowledge is of a meager and unsatisfactory kind" (Lord William Thomson Kelvin). This unsatisfactory situation dominates discussions about loan guarantee programs where advocacy is far ahead of documented results. It may be time to do more careful documentation of the results of loan guarantee programs.

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