

EVALUATING CREDIT GUARANTEE PROGRAMS IN DEVELOPING COUNTRIES

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June 1996

Selected Paper presented at the meetings of the American Agricultural Economics Association held in San Antonio, July 1996.

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Abstract

The paper discusses the key issues involved in evaluating credit guarantee programs for agricultural and small enterprise lending in developing countries. A review of results of evaluations shows that there is little quantitative information to clearly support the use of guarantee programs to stimulate lending in developing countries.

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Credit guarantees are advocated for many developing countries as a means to entice reluctant lenders into lending to clientele groups of interest to governments and donors, such as agriculture, small farmers, women, microenterprises, and the poor. It is usually assumed that a major impediment to formal sector lending is the perceived risk associated with such loans. By reducing default risk through a guarantee, it is expected that lenders will make more loans to credit rationed clients. By offering partial guarantees, more borrowers are benefitted than would occur if the same funds were used to rediscount targeted loans. Furthermore, it is expected that the lenders will learn that these clientele groups are not so risky, so they will lend to them in the future without the need for guarantees.

Guarantee programs are funded in several ways. An external source often provides the initial capital for the guarantee fund. Recent innovations, based on the concept of mutual credit associations, use group-based savings deposited in a bank account to guarantee loans made to group members. Donors and NGOs may complement these local savings with a second tier guarantee to leverage the funds lent. Women's World Banking, for example, deposits funds in local banks to leverage the funds deposited by local WWB affiliates for use as loan guarantees.

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The impact of credit guarantees is unclear and there is plenty of skepticism by both theorists and practitioners. Since most crop insurance programs that cover specific insurable risks are subsidized, it is logical to expect that a comprehensive credit guarantee with its severe adverse selection and moral hazard problems would be even less viable. Many skeptics conclude that guarantees represent subsidized credit dressed in new clothes. On the other hand, governments, donors and bankers often advocate guarantees so they have been introduced in several developing countries.

No comprehensive evaluation of loan guarantees has been conducted since the study conducted by Levitsky and Prasad in 1987. They concluded that it was difficult to demonstrate that much additional lending actually occurred because of small and medium business loan guarantees. Subsequent empirical evidence has been mixed. ACCION International claims that its guarantee schemes are a major reason for the recent expansion in microenterprise lending Latin America. The large agricultural credit guarantee scheme in Nigeria, however, covered only a small portion of agricultural lending in the early 1980s. But the enormous bad debts associated with agricultural lending were expected to eventually destroy the guarantee fund. The major guarantee programs in Colombia and Mexico have also experienced difficulties with fund viability.

The objective of this paper is to summarize a study of guarantee programs we recently completed. In the paper we first discuss the key issues involved in evaluating credit guarantees. Then we review the results of evaluations that have been conducted of guarantees for agricultural and small enterprise lending in developing countries. We conclude the paper with some general observations about credit guarantees.

II. Evaluating Credit Guarantee Schemes: Key Issues

Considering the relatively long time that credit guarantees have been used in the U.S. and abroad to influence lending, surprisingly few good comprehensive evaluations have been conducted. At least four reasons can be identified that explain this situation.

■ **Methodological complexity.** The difficulty of analyzing the impact of credit programs is well understood (David and Meyer; Von Pischke and Adams; MSI, Feb. 1990). An important attribute of money is its fungibility; it can be used for a variety of uses and one unit from one source is completely substitutable for one unit from another source. Fungibility makes money a valuable commodity but creates a problem when evaluating the impact of a borrower getting a loan, especially if it was intended for a specific purpose. Assume that a loan was intended for a particular purpose, say, buy a production input. The borrower may not have been able to buy the input without the loan. In this case, the loan "caused" the purchase of the input, and the "additionality" attributable to the loan is the full value of the input purchase. Alternatively, the borrower may have purchased the input even without the loan, but with it is able to use his own resources for other purposes. The additionality "caused" by the loan is whatever the borrower did with the resources previously destined for the purchase. When loan monitoring is lax or difficult, the borrower may divert the loan funds earmarked for the input to different purposes.

To assess the impact of a loan it is necessary to estimate the "counterfactual," that is, what would the borrower have done without the loan, then compare that with what was done with the loan. The counterfactual can never be measured so some proxy is needed. Frequently this involves comparing the current situation of borrowers with some earlier baseline data, and attributing some portion of the observed changes to borrowing. Alternatively, the performance of borrowers (the

treatment group) is compared with nonborrowers (the control group) and any improvement observed in the treatment group is attributed to borrowing.

These attempts have obvious limitations. First, they don't completely control for those factors, in addition to borrowing, that affect a borrower's performance over time. Second, problems of self selection imply that borrowers may be systematically different from nonborrowers. These inherent differences may imply that borrowers will perform better even without loans than will nonborrowers (Adams). Furthermore, if lenders succeed in screening their borrowers to select those most likely to repay, we should expect that borrowers **will be** different from nonborrowers. Alternatively some nonborrowers may not try to borrow for fear of being credit rationed by lenders. Thus, borrowers may outperform nonborrowers because they take more risks than nonborrowers.

These problems of credit evaluation also exist for evaluations of guarantee programs. It is difficult to evaluate credit guarantees without knowing what lenders and borrowers would have done without access to guarantees. Furthermore, the incidence of guarantee programs is not random because not all lenders and borrowers have access to them. Those with access may have inherent qualities different from those without access. Furthermore, the "treatment" in a credit guarantee is often multifaceted, that is there is a guarantee plus something else. For example, there may be a quota for banks to lend to small enterprises. This quota may "cause" the banks to consider making loans they are convinced are unprofitable. If a guarantee is offered, they may accept it to reduce expected losses. If the quota is removed, they may refuse to make the loans even with guarantees. In some cases guarantees are offered as part of an integrated package including training and technical assistance. Evaluating the guarantee involves disentangling the effects of the other elements of the package.

■ **Expense.** Resolving these methodological problems implies costs to carefully design studies, collect data, and employ appropriate analytical techniques. An example of a robust methodology is the paper by Pitt and Khandker on the World Bank's comprehensive study of credit for the poor in Bangladesh. Nothing else approaching this effort has been found in the guarantee literature. Improvements in evaluation methodology can be made by having lenders regularly collect and report data on their loans. This approach raises lender transaction costs, however, and although useful for evaluators the information has little value in helping the lenders monitor and improve their operations. Therefore, they have little incentive to carefully collect these data.

■ **Competing objectives.** The objectives of the three agents - guarantor, lender and borrower - may conflict and some guarantee programs are unclear about their objectives. Rhyne analyzed this problem in the U.S. Small Business Administration guarantee program. If the guarantee is designed to reduce credit market failure, the issue of impact on borrowers is less significant. The crucial issue is whether or not market failure is reduced. However, if the guarantee is designed to stimulate economic growth, it is important to determine if the firms of guaranteed borrowers grow faster than nonguaranteed borrowers. Clear objectives help identify what data are needed for an evaluation to determine if objectives are being met.

■ **Incentives.** The last reason for few comprehensive evaluations concerns the lack of incentives. Rhyne's analysis of the SBA illustrates the lack of demand for good information. Often there is a demand for governments, donors, and banks to assist a target group such as micro enterprises in developing countries. The easiest way to respond and spend money, short of making subsidized loans, may be to fund a guarantee program. Immediate political benefits may be obtained

by creating the program. Even if it accomplishes little or produces unexpected negative results, the problems may emerge only during the next political administration.

III. Impacts of Guarantees: A Review

Evaluations of guarantee schemes must assess impacts on three agents - guarantor, lender and borrower. Most evaluations, however, have been limited to a few issues the author(s) have been commissioned to study or believe to be most important. Since the objectives of many schemes are vague, evaluations are often unclear about what to measure, and how to evaluate the positive and negative impacts on the three agents. Many schemes do not collect initial baseline data so evaluators have difficulty in clearly determining what changes have occurred during the life of a guarantee.

■ Impact on the Guarantor

The first important aspect to evaluate is the status of the fund or annual appropriations used to cover operations and loan losses. The data and anecdotes available suggest that many programs fail because the payments to lenders for loan losses exceed the revenues and reserves of the guarantee funds. For example, the Nigerian Agricultural Credit Guarantee Scheme was set up in 1977 with a capital fund of N100 million to stimulate lending to small farmers. It was slowly decapitalized because the operating costs and claims in several years exceeded investment income. In 1988 about 15 percent of the guaranteed loans were reported in default (Njoku and Obasi).

Oehring (1995) recently reported on the status of 12 Latin American guarantee schemes. Two existed for over two years, are insufficiently used and show deficits, but possess sufficient assets to cover guarantees and losses. A third microenterprise scheme was restructured two years ago, and so far shows good results. The other nine have no assets left or have been closed. Some failed because of poor design, others because of poor management and undiversified investment

strategies, and in other cases, through corruption or political intrigue, guaranteed loans were granted to borrowers with no intention of repaying.

If complete information were available, we suspect it would show that the financial landscape in developing countries is littered with failed guarantee schemes. There are allegations that some guarantee funds have failed to pay losses or have dragged out the payment process to avoid exhausting the fund. It appears that many guarantee schemes have been set up and are viable for a few years. Then loan losses emerge and eventually mushroom; the fund is recapitalized, and the cycle starts again. The Credit Guarantee Corporation in Nepal illustrates the problem. It guarantees commercial bank loans to small enterprises. Although it guaranteed less than half of the loans made to the priority sectors in the mid-1980s and many defaulted loans were never submitted for claims, the fund failed and had to be recapitalized (Kongsiri).

Little information exists about the efficiency of fund operations. Some funds provide global portfolio guarantees so they avoid the task of evaluating applications for individual guarantees. Schemes with selective guarantees, however, require staff to review individual loans proposed for guarantees. The efficiency of this process influences operating costs, and the transaction costs and waiting time borne by banks and borrowers. The agricultural loan guarantees made in Mexico by FEGA (Fondo Especial de Asistencia Tecnica y Garantia para Creditos Agropecuarios) illustrates the problem (World Bank). The FEGA staff essentially replicate the functions of and, in some cases, substitute for bank staff in appraising, monitoring and collecting loans. These services were free until 1988 when charges of two to three percent of the value of loans made were introduced, but this income has been too low to cover high administrative costs and loan losses.

Guarantees financed by annual appropriations offer an advantage with respect to public policy because their costs are more transparent than programs funded by endowments. One problem with endowed funds is that they are often assumed to have zero opportunity cost. If the fund survives without further capitalization, this implicit subsidy is disguised and may never be evaluated relative to any benefits obtained. Analysis of the accounts of the Fondo Nacional de Garantia in Colombia revealed that the implicit subsidy amounted to almost 8 percent per year over the period 1982 to 1994 (Gudger). The annual premiums charged guaranteed loans would have to be raised from their average level of 4.8 percent to 12.6 percent for the fund to break even.

■ **Impact on Lenders**

Analyzing impacts of guarantees on lenders is more difficult than measuring financial aspects of the fund. If the guarantee accomplishes its objectives, lenders will increase lending to the target client and/or the terms will be softer (reduced collateral requirements, lower interest rates, longer term, etc.). Through learning by doing the lenders may begin to make the same loans without guarantees, and guaranteed borrowers who perform well may graduate to unguaranteed loans. Lenders may use guarantees as a marketing tool to attract clients for their other products. In secondary markets, guarantees may increase the marketability of loans made with low collateral requirements or loan to income ratios. If guarantees are designed or implemented poorly, they can have negative impacts. The guarantee could induce laxness in loan screening, monitoring and collections. Lenders could experience a reduction in return on assets because transaction costs and delays in loan processing rise. Lenders can suffer losses if the guarantor lacks the funds to cover losses or the delays in payment raise costs and lower the real value of the compensation received.

A necessary condition for a guarantee to make a positive impact on lenders is that loans are actually guaranteed. Some guarantees fail for lack of demand. For example, a guarantee for small and medium enterprise loans in Botswana guaranteed only 40 loans between 1988 and 1990, and they represented only 18 percent of the available guarantee fund (MSI, Nov. 1990).

Simply making guarantees is insufficient evidence of success for most programs, however, because their usual objective is additionality, i.e., lenders make loans that otherwise would not have been made. The few studies that carefully test for additionality have produced mixed results. Two reports analyzed the ACCION International guarantee for its affiliates in Mexico, Chile, Paraguay and Costa Rica (MSI, 1990; Painter). AID established a U.S. \$1 million guarantee facility through a loan to ACCION International. The loan was deposited in a U.S. bank which issued standby letters of credit to Latin American banks that lent their own resources to local ACCION affiliates for on-lending to micro enterprises. With the guarantee, the affiliates were able to augment their resources and increase their lending to customers unable to access regular bank loans. Since they had limited access to other funds, the resources available through the guarantee probably resulted in loans to micro enterprises in approximately the same amount, that is most of the loans probably would not have been made without the guarantee. The additionality argument is harder to make for large institutions with abundant resources. In this situation loans supposedly made because of a guarantee may simply substitute for some loans the institution would have made anyway.

Determining additionality due to several guarantee schemes in the Philippines has been difficult. One study analyzed a private development bank in the Northern Mindanao region (Llanto and Casuga). In October of 1991, about 15 percent of its outstanding loans were guaranteed through one of the guarantees operated by the Comprehensive Agricultural Loan Fund. The borrowers were

mainly small farmers unable to provide the collateral normally required by the bank. Over 300 farmers received guaranteed loans from November 1987 to July 1991. The guarantee alone, however, could not be credited with these loans because the bank used a “systems” approach in which the borrowers received technical information, production inputs, and a secure market. This combination made the borrowers creditworthy. Even so, about 10 percent of the outstanding loans were in default in July 1991 and claims for guarantee payments filed in 1989 were still unpaid in February 1992 because of a dispute between the bank and guarantor over documentation.

An earlier study by Magno and Meyer analyzed how several guarantees affected the supply of agricultural credit during the early 1980s. In this period the Filipino banks generally decreased their agricultural lending while the ratio of guaranteed to total agricultural loans rose from less than 2 to 5 percent. The ratio was higher for medium sized private development banks than for the large commercial banks and, surprisingly, for small rural banks. Since the guarantee schemes also had a rediscounting facility, some substitution of fund sources probably occurred. An important reason for the low participation rate of many banks was the additional transaction costs required for guaranteed loans.

Two Filipino banks participating in a small and medium scale enterprise guarantee were evaluated (MSI, Feb., 1990). The majority of the targeted loans financed exports or imports by local producers and a few provided long-term investment credit. Both banks claimed that the guarantee enabled them to lend to borrowers not otherwise qualified. One bank estimated that 80 percent of the guaranteed loans would not have been extended because of borrower lack of collateral and the bank’s policy of discouraging loans to borrowers without a credit history. No data were presented, however, to substantiate these claims.

These studies suggest that guarantees have had a mixed record in influencing lenders to make loans they are reluctant to make without guarantees. The ACCION example is one in which lender-borrower relationships developed because of the guarantee so that subsequent loans were made without guarantees. The guarantee enabled the affiliates to make micro enterprise loans. In some cases, however, lender participation has been limited because the guarantee was unattractive or the credibility of the guarantee facility was questioned. Additionality has been difficult to determine. The analysis undertaken to determine the impact of guarantees has often not been robust enough to produce credible results.

Impact on Borrowers

Measuring impact on borrowers is complex in part because there are debates about what to measure. An important question is additionality: did previously rationed borrowers receive loans and/or larger loans than would have occurred without the guarantee. A second question is whether or not the terms of loans for the target clientele became softer. Third, some sceptics of the role of credit in development want evidence about how borrowers actually benefited, that is did they produce more, earn a higher income, live better, etc. Fourth, a comprehensive analysis would also analyze impact on nonguaranteed borrowers. They might face higher interest rates if lenders charge them to cross-subsidize lower returns earned from guaranteed loans or they may be crowded out if lenders allocate scarce funds to guaranteed borrowers. Unsubsidized borrowers compete with borrowers who receive subsidized guarantees so a complete analysis would account for any losses in production, sales and profits they might experience because of this competition. Since this analysis is rarely attempted, most impact studies probably overestimate the benefits of guarantees.

An evaluation of a small enterprise guarantee in Botswana showed that guaranteed borrowers seemed to experience an increase in sales revenue but little additional employment compared to nonguaranteed borrowers in a small sample of 20 observations (MSI, Nov. 1990). The evaluations of the ACCION guarantee found that many of the micro entrepreneurs who borrowed after the guarantees were issued were previous customers so no great expansion of borrowers occurred (MSI, 1990, Painter). The evaluators tried to reconstruct the firms' assets, sales, profits and employment before becoming borrowers for comparison with the current situation. Positive changes were noted but the evaluators cautioned that the results could not all be attributed to the guarantee. Interviews with borrowers revealed that many would not have gotten loans without the ACCION programs nor would their enterprises have performed as well.

Comprehensive attempts to measure borrower impact in the Philippines have produced mixed results depending on the specific source of guarantee, the type of lender, the time the analysis was conducted, and the sample of borrowers studied. All the studies lacked benchmark information and were forced to reconstruct data for the enterprises or rely on impressions of lenders and borrowers. The study of the Mindanao development bank revealed that 14 out of 20 farmers interviewed did not even know that their loans were guaranteed even though they had to pay guarantee fees (Llanto and Casuga). It appeared that the bank made loans to some customers without the collateral normally required of borrowers. It was not possible to determine if this could be attributed to the guarantee or to other elements of the systems approach used in lending.

Bautista studied 17 Filipino banks of various types serving agricultural clients. His results raise doubts about the additionality of guarantees because the majority of borrowers had previous bank relationships, the loans were fully secured or the borrowers possessed good credit relationships,

and the majority of the banks reported they would have granted the loans without guarantees. The reasons the banks participated was due more to the complementary features, such as interest subsidies and liquidity and rediscount features, rather than risk sharing designed to expand loans to rationed customers.

The comprehensive analysis conducted by Llanto and Magno involved a survey of borrowers and nonborrowers of three programs selected in three regions. Guarantees did not affect the size of loans received because the banks and cooperatives follow a set formula in making production loans. Some guaranteed borrowers were able to get lower interest rates than nonguaranteed borrowers because of rediscount facilities available with guarantees. Procedures were streamlined so the transaction costs for guaranteed and nonguaranteed borrowers were similar, but waiting times for loan disbursement were still longer for guaranteed loans. Borrowers faced higher costs because of guarantee fees accessed to them and they may receive few offsetting benefits in the form of increased additionality in lending.

An evaluation of the small and medium enterprise guarantee in the Philippines found that loan maturities and interest rates were roughly the same for guaranteed and nonguaranteed borrowers, but collateral requirements were sometimes less (MSI, February 1990). The evaluators tried to reconstruct the performance of borrower firms over time in terms of growth in gross revenue, net income, employment, and exports and foreign exchange earnings. These estimates suggested that 5 to 75 percent of the observed changes could be attributed to the guaranteed loans. The evaluators observed, however, that a variety of unmeasured external (ex. general changes in the economy) and internal (ex. improved management skills) factors “caused” the changes reported in the performance of these firms.

The methodological problem of conducting a good borrower impact study is exemplified in a recent evaluation of the U.S. Small Business Administration guaranteed business loan program (Price Waterhouse). This study compared a sample of businesses that received SBA guaranteed loans in 1985 with a comparison sample of 1985 businesses of similar size and industry but that had never received a SBA loan. The borrowers tended to be newer entrants into the market, the SBA loans were reported to be used more than commercial loans to start a business rather than expand it, and a higher proportion of SBA borrowers were still in business in 1989 compared to the comparison group. No statistical tests were reported, nor is there any discussion about how the response rates of 50 to 60 percent may bias the results. Another important problem is the fact that more SBA firms were new compared to the comparison group so the effects of “newness” cannot be separated from the effect of obtaining a guaranteed loan.

IV. Conclusion and Implications

We conclude that there is surprisingly little quantitative information to clearly support the use of guarantee schemes to stimulate lending in developing countries. Many studies of credit guarantees suffer from the same methodological weaknesses found in impact analysis of credit programs. More analysis is needed to determine if guarantees really produce the results that their designers expect, and if the benefits obtained justify the costs and subsidies involved. Attributing additionality to guarantee programs is difficult to ascertain with simple research designs, but more robust methodologies are costly, and require a great deal of data and talent to complete. Evaluating the revenues, costs and losses of guarantee funds is necessary to determine implicit subsidies and future viability. More attention is needed to evaluate the impact of guarantee schemes on lender behavior and the overall operation of financial markets, and less effort should be put into the difficult

task of assessing impact on borrowers. Resources should be concentrated on a few comprehensive evaluations of borrowers and lenders to learn if some of the fundamental assumptions about the impact of guarantees are correct. New methods need to be developed so lenders and borrowers can provide simple and inexpensive information useful for monitoring and evaluating guarantees.

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