

Report No. 17953

World Bank Support for Small Scale Enterprises in Ecuador

An Impact Evaluation

June 3, 1998

Operations Evaluation Department



Acronyms

BCE	Banco Central de Ecuador (Central Bank of Ecuador)
CEM	Country Economic Memorandum
CFN	National Finance Corporation
CORDES	Corporacion de Estudios para el Desarrollo
CPIS	Cámaras de Pequeña Industria (Chambers of Small Industry)
DFC	Development Finance Company
DNA	Directorio Nacional Artesanal (National Registry of Artisans)
FOPINAR	Fund for the Development of Small-Scale Industry and Artisans
FSAL	Financial Sector Adjustment Loan
ICR	Implementation Completion Report
IFP	Industrial Finance Project
PAR	Performance Audit Report
PCR	Project Completion Report
PFI	Participating Financial Institution
SAR	Staff Appraisal Report
SB	Superintendency of Banks
SMI	Small and Medium Scale Industrial Enterprises
SSE	Small Scale Enterprise

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June 3, 1998

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

**SUBJECT: World Bank Support for Small Scale Enterprises in Ecuador:
An Impact Evaluation**

Attached is the Impact Evaluation Report on the World Bank Support for Small Scale Enterprises in Ecuador, prepared by the Operations Evaluation Department (OED). Between 1980 and 1996 the World Bank provided Ecuador with US\$140.6 million in financing for small scale enterprises (SSEs) through four loans. The last project closed in FY96.

The principal aim of the SSE projects was to increase substantially the availability of term financing for micro and small firms, while improving the banking system's ability to lend to this sector. The SSE lending took place in the context of a growing dialogue between the Bank and the Government on financial sector and industrial policies. The first two projects were traditional financial intermediary loans, whereas the third and fourth projects included some policy conditionality and were implemented in conjunction with policy based lending designed to encourage the government to liberalize the financial sector and interest rates.

This evaluation provides an empirically based perspective on the Bank's strategy and its impact on SSEs. It makes use of a survey of more than 200 firms, 145 of which were beneficiaries, while the others served as a control group. Structured interviews with participating financial institutions (PFIs) were also undertaken. The analysis considers the effects of the loans and of other Bank interventions, both lending and non-lending, on SSEs and PFIs. This broader perspective on Bank interventions is part of a greater OED emphasis on a country, rather than a project, being the "unit of analysis."

The central finding of this study is that the SSE projects did not have a beneficial impact on development effectiveness. These projects, particularly the first three, fell short in all three criteria of relevance, efficacy and efficiency, and they were not sustainable. They were very costly for the Government of Ecuador, and probably also had regressive distributional effects. The highly distorted economic environment prevalent in Ecuador during most of the implementation period of the first three loans, in particular, the highly negative real interest rates, along with regulated wages and a heavily protected industrial sector, meant that the loans could not have the desired impact. From a public finance perspective, the projects were poorly structured: they substituted government transfers for finance, provided very large subsidies to a limited number of borrowers, and provided almost no incentive for lenders or borrowers to view the projects as financially sustainable transactions. The last project, which was approved in 1990, disbursed during a period of stabilization and adjustment, and for the first time, positive real interest rates on lending were achieved. However, because only a limited number of enterprises in our survey received credits under this loan, and only in its earliest years, this policy shift is not studied here.

The major lessons of these projects are that: (i) disbursement rates, default rates and accounting-based estimates of employment creation are not accurate measures of the outcome of a financial intermediary project; (ii) a coherent strategy for removing distortions in the economy—i.e., getting the prices right—is necessary before undertaking financial sector lending; (iii) caution is needed in designing projects whose success hinges on politically controversial reforms, particularly in the period leading up to elections; and (iv) targeted lending should not be undertaken with insufficient information and without verifying the underlying assumptions. The findings of this study contrast with those of a similar study of lending for small and medium scale industrial enterprises (SMIs) in Sri Lanka. The latter study concluded that in Sri Lanka, support to SMIs has been a relatively effective employment program. Much of the variation between the two country experiences was due to differences in the macroeconomic environment and in the extent and timing of adjustment. However, the Sri Lankan projects also focused on integrating small and medium sized firms into the financial system. That was not the case in Ecuador. These contrasting experiences highlight the need for careful analysis of individual country conditions before undertaking such projects.

Robert Picciotto
by Elizabeth McAllister

Attachment

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The task manager for this report was Alice Galenson. It is based on a study prepared for OED by the Ecuadorian consulting firm CORDES (Roberts, et. al., 1997). Robert Buckley and Edgard Rodriguez (consultant) also made major contributions to the report. Dipak Mazumdar (consultant) helped structure the approach and designed the survey instrument. Geri Wise provided administrative support.

World Bank Support for Small Scale Enterprises in Ecuador: An Impact Evaluation

Executive Summary

1. During the 1980s and the first half of the 1990s, the World Bank lent \$140 million to Ecuador through four projects to finance lines of credit for small scale enterprises (SSEs). At the same time, economic and sector work, the policy dialogue, and policy-based lending influenced the environment in which SSEs operated. This impact evaluation attempts to measure some of the medium term effects of the Bank interventions, including lending and non-lending activities, on the beneficiaries (SSEs), on the participating financial institutions (PFIs) and on the economy.

The Bank-Government strategy for SSEs

2. The SSE strategy in Ecuador was based on the assumptions that a dynamic SSE sector would generate growth and employment, but that in order to do so, it needed greater access to term finance. The loans sought to ease the scarcity of term finance for micro and small firms by providing funds while improving the banking system's ability to lend to this sector. It was further assumed that by providing credit to small firms, which were thought to be labor intensive, especially outside of the major urban centers, jobs would be created at low cost, resulting in improved income distribution and poverty alleviation.

The projects

3. Beginning in 1980, the projects lent money through the banking system to over 16,000 small enterprises. The first two projects (approved in 1980 and 1982) focused on the creation of an effective apex institution and the establishment of interest rate spreads that would be attractive to commercial banks. Although the Bank was pursuing a policy dialogue with the Government on a set of issues critical to the financial and industrial sectors of Ecuador, the first two SSE loans were traditional financial intermediary loans, undertaken relatively independently of that dialogue. They were made in a rapidly growing "pre-debt crisis economy," one that relied on a financial sector that had long provided fixed and negative interest rate lending for industry, and on oil revenues to finance government. The country's development strategy relied largely on international borrowing rather than domestic resource mobilization efforts to fund investments.

4. Indeed, in many respects the objectives of the first two loans can be seen as an attempt to help the Government of Ecuador offset some of the more adverse consequences of Ecuadorian development strategy. For example, to offset the links between banking-industrialist economic groups lending to themselves at negative interest rates, the project sought to provide credit to those not served by the formal financial sector. Similarly, to avoid the distortions implied by labor market and trade restrictions, the projects attempted to fund the small, labor-intensive firms which were thought to be operating outside the purview of these regulations. The fact that these small firms hired low-skill workers implied that targeting assistance on these firms would also have desirable distributional consequences. Finally, to offset the "urban bias" of an overvalued exchange rate, the projects sought to encourage a wider geographic dispersion of small industry.

5. In 1982, at the time of SSE II approval, the international debt crisis took hold. The Ecuadorian development strategy, like that of many other countries, collapsed. A new government in 1984 embraced a shift to a more market-oriented development strategy, and with the initiation of financial sector adjustment lending, the third SSE loan, in 1986, incorporated financial sector policy conditionality. However, the improvements in macroeconomic conditions which occurred during the preparation of SSE III were short-lived. Political change and exogenous shocks caused conditions to deteriorate shortly after approval. The result was that real interest rates under SSE III were not only negative once again, now they were deeply negative, and policy conditionality was not enforced.

6. Like the third project, the last project, which was approved in 1990, disbursed during a period of stabilization and adjustment. SSE IV introduced an adjustable interest rate on subprojects, with the aim of reaching market-determined commercial bank rates, and positive real interest rates on lending were finally achieved. However, because only a limited number of enterprises in our survey received credits under this loan, and only in its earliest years, this policy shift is not studied here.

Other Bank activities in the financial sector

7. The oil boom of the 1970s, while allowing Ecuador's GDP to grow rapidly, also created significant macroeconomic imbalances. One of the most severe of these imbalances was the increasing indebtedness of manufacturing firms financed by international borrowing. During the 1970s, for example, the share of credit lent to private manufacturers almost doubled, even though Ecuador's financial sector simultaneously showed little buoyancy and growth. Central bank lines of credit financed this credit expansion. In the early 1980s, before the collapse of this system, the Bank had recommended a number of policies to maintain growth, including some with direct implications for the financial sector and SSEs: liberalization of interest rates, devaluation and reform of the trade regime.

8. However, the Bank did not pursue these broader policy objectives in the first two projects. It was only later, as the policy regime collapsed, that the Bank began to pursue these objectives in the design of SSE projects, as well as through its dialogue with the Government and in a number of lending operations that proceeded in parallel with SSE lending.

9. Periodic political and economic shocks contributed to swings in economic policies and in the macroeconomic situation. Because of the design of the SSE loans, these shocks had significant adverse effects on the costs and efficiency of the SSE projects. For instance, the market oriented government elected in 1984 changed its approach in response to exogenous events and mid-term elections in 1986. The result was that the positive interest rates on SSE III turned deeply negative shortly after loan approval. Similarly, a Financial Sector Adjustment Loan in 1987 succeeded only partially, due in part to the election in 1988 of a government opposed to market-based reform. Finally, an Industrial Finance project was suspended for a year due to non-compliance with the interest rate covenant.

10. The 1992 election brought in a government committed to stabilization and liberalization, and interest rates became positive, then highly so. A 1993 Private Sector Development project for a line of credit to private medium and large enterprises in all sectors included a clause to guard against the reversal of previously adopted trade and financial sector reforms. However,

additional shocks, another election and a subsequent political crisis have resulted in continuing uncertainty for Ecuador's economy today.

Methodology

11. This evaluation provides empirical evidence and a long term perspective on the Bank's strategy and impact in one sector of one country. The study offers empirical evidence based on a survey of beneficiary firms and a control group of firms which did not receive loans. It also examines the performance of the PFIs, based in part on a series of structured interviews with some of the participating banks. Considerable attention is given to the policy dialogue and to other, related lending. Such a perspective is part of a growing OED emphasis on the country and the sector, rather than on individual projects, as the unit of analysis.

Findings

12. The central finding of this study is that the first three SSE projects did not have a beneficial impact on development effectiveness. These projects fell short in all three criteria of relevance, efficacy and efficiency, and they were not sustainable. They were very costly for the Government of Ecuador, and probably also had regressive distributional effects. The highly distorted economic environment prevalent in Ecuador during most of the implementation period, in particular, the highly negative real interest rates, along with regulated wages and a heavily protected industrial sector, meant that the loans could not have the desired impact. By continuing to provide deeply subsidized credits to borrowers, rather than access to credit, the projects substituted government transfers for borrower finance. Market imperfections may have provided a rationale for small subsidies at the program's initiation. They did not, however, provide a rationale for extremely large subsidies to a limited number of borrowers more than eight years after lending commenced. Consequently, from a public finance perspective, the projects were poorly structured: they substituted government transfers for finance, provided very large subsidies to a limited number of borrowers, and provided almost no incentive for lenders or borrowers to view the projects as financially sustainable transactions.

13. Simply put, the provision of long term credit at fixed interest rates was the wrong instrument. Furthermore, even though the institution created by SSE I, and sustained by II and III, FOPINAR, was considered one of the most effective institutions supporting small and medium industry, it has little or no ability to mobilize domestic resources. Its provision of funds to small firms within such a deeply distorted financial system in many respects contributed to the system's distortions. An approach that started by either reforming the financial sector or relying on sustainable microfinance institutions would have been a better way to provide support for small scale entrepreneurs who were unable to access credit. SSE IV did not suffer from the same deficiencies as the first three projects. Real interest rates on FOPINAR loans have been positive, and increasingly so, since 1991. However, given the need to allow adequate time before studying impact, it was not possible to include the bulk of SSE IV lending in this study.

14. *Firms and employment.* Firms that borrowed under the World Bank lines of credit increased their value added more rapidly than did the control group. However, the costs of the subsidies to the beneficiaries in SSE I - III almost certainly canceled out, and may have exceeded, the gains in value added by these firms. The rate of job creation was lower than that of the control group. In addition, the high failure rate among the beneficiary firms—only one-third of

those receiving credit in the early 1980s still survive—implies that even the limited benefits of the program in terms of job creation have diminished sharply over time. Finally, employment also grew faster in larger firms than in the smaller ones which were the targets for the Bank credit. Consequently, the credit, particularly under SSE IV, was restricted to firms which were unlikely to generate the most jobs. Given the negative interest rates that prevailed during much of the 1980s and early 1990s (at levels as low as negative 50 percent), along with the legislated above-market wages, it is not surprising that the small firms receiving Bank credit tend to be overcapitalized—they are less labor-intensive than non-beneficiary firms. Moreover, very small firms appear to be less efficient than larger ones—they use more capital and labor to produce the same level of output.

15. *Income distribution.* This study confirms the suggestion raised in the OED Audit of SSE III— that the SSE projects did not improve income distribution. Because entrepreneurs who borrowed under the projects received such large subsidies and generated so little employment, these entrepreneurs, rather than their employees, were the recipients of most of the income generated by the projects. Their socio-economic characteristics are quite different from that of the poor. Further, employment of unskilled labor has grown faster in larger firms (those with more than 10 workers) than in the smaller firms which received the majority of the loans. The generation of unskilled employment in enterprises larger than the micro and small ones that received the lion's share of the Bank's funds would therefore have been a more effective way of achieving distributional goals.

16. *Diversification and decentralization.* Over time, credit to SSEs has become both more diversified and more decentralized (subsidiary objectives of the projects): over half of the credit in recent years went to services and industries other than the four principle ones, as well as to provinces other than the three main ones. However, it is questionable whether these are relevant objectives for Bank support. A considerable amount of Bank work has shown that providing locational incentives to firms is usually expensive and ineffective. While large firms tend to rely on economies of scale to lower production costs, small firms depend more on economies of agglomeration generated by proximity to firms engaged in similar or complementary activities. Again, focusing directly on the sources of the spatial distortions, such as the overvalued exchange rate, would have been a more effective strategy.

17. *SSE access to credit.* Ecuador's financial sector began the period of SSE lending as one of the most repressed and underdeveloped systems in Latin America. It was a system that rationed credit at subsidized rates to preferred borrowers. In such a system small firms are almost certainly provided limited access to credit. By the end of the projects Ecuador's financial system had liberalized and started to grow. Nevertheless, this system shows considerably less depth than those of most Latin American comparator countries. In addition, due at least in part to the continuing macroeconomic turbulence, real interest rates have been at very high levels, over 30 percent. In such an environment, all borrowers, not just small ones, face difficult financial concerns.

18. Nevertheless, some progress has been made. For instance, even though a number of PFIs still depend almost completely on public funds for SSEs, some now have SSE lending programs with their own (short-term) funds. The survey of beneficiaries confirmed that most firms have access to credit, although access to medium and long-term credit (more than 1 year) is rare outside of the Bank projects. It is not clear, however, whether the Bank support for SSEs, or, for that matter, its financial sector dialogue, made any contribution to this progress.

19. *Financial institutions.* While negative interest rates subsidized capital to small firms, the banking system was also being subsidized during much of the period under study. Very generous margins were built into the projects for both the banks and the second tier institution. In addition, the banks had to mobilize only 10 percent of the project costs, so the projects were in some respects an enclave Bank-funded operation, with little integration into the financial system. Margins started to decline in the late 1980s: by 1992, spreads on 90-day loans were far more attractive than spreads on the World Bank funds. Not surprisingly, the share of Bank-funded long-term credit declined from 1 percent to 0.15 percent of credit in the banking system—and from 6 percent to 2 percent of all long term loans—between 1992 and 1996. (In comparison, total long-term credit from private banks fluctuated between 16 and 2 percent of their portfolio during the same period.) Ultimately, the Bank loans did not increase the availability of sustainable long-term credit to the economy.

Lessons learned

20. *Indicators of success.* Disbursement rates, default rates and accounting-based estimates of employment creation are not accurate measures of the outcome of a financial intermediary project, particularly when the lending is heavily subsidized and it is undertaken in a distorted economic environment. Despite satisfactory performance on all of these measures, the SSE loans in Ecuador have not had a cost effective impact on the country's economic development. To measure the development effectiveness of a financial sector project, information is also needed on its longer term impact in real terms on the beneficiary enterprises, and on the economic costs of providing such assistance.

21. *Good institutions cannot overcome a weak policy environment.* The results of this impact evaluation provide quantitative evidence to reinforce the traditional lesson, emphasized for the financial sector by Operational Directive 8.30, that it is important to have a coherent strategy for removing distortions in the economy—i.e., getting the prices right—before undertaking financial sector lending. FOPINAR may have been a relatively effective second tier lender of World Bank credits for small and medium enterprises. However, its operation within a very disrupted financial and macroeconomic environment certainly did not contribute to a better functioning financial sector. Indeed, one could argue that its continued disbursement of funds at deeply negative interest rates, particularly under SSE III, contributed to financial instability. Finally, the fact that FOPINAR is now facing financial difficulties reflects on its limited abilities to mobilize resources.

22. *Project design under macro instability.* Political changes, in conjunction with exogenous shocks, resulted in some major policy reversals during implementation of the SSE program. While election results and shocks are often unpredictable, the Ecuador experience attests to the need for caution in designing projects whose success hinges on politically controversial reforms, particularly in the period leading up to elections. The use of fixed or below market interest rates for subloans financed under these projects precluded the possibility of responding flexibly to changes in the financial environment. It also resulted in open-ended and very large subsidies whose level was determined by the rate of inflation rather than by policy-makers.

23. *Directed credit for Bank lending for micro and small enterprises.* Bank lending to small and medium scale enterprises was premised in part on the assumption that such lending would support efficient, labor intensive growth, an assumption that proved to be unfounded in Ecuador.

The case of Ecuador underlines the need for caution in targeting lending with insufficient information and without verifying the underlying assumptions. More importantly, there is no obvious reason why it took more than 11 years after the approval of the first loan for the interest rates on subloans made under the projects to be set at approximately market levels.

24. The findings of this study contrast with those of a similar study of lending for small and medium scale industrial enterprises (SMIs) in Sri Lanka. The latter study concluded that in Sri Lanka, support to SMIs has been a relatively effective employment program. Much of the variation between the two country experiences was due to differences in the macroeconomic environment and in the extent and timing of adjustment. However, the Sri Lankan projects also focused on integrating small and medium sized firms into the financial system. That was not the case in Ecuador. These contrasting experiences highlight the need for careful analysis of individual country conditions before undertaking such projects.

1. Introduction

1.1 This study is an impact evaluation of Bank support for small scale enterprises (SSEs) in Ecuador. Between 1980 and 1996, the World Bank provided Ecuador with \$140.6 million in financing for SSEs through four loans.¹ This amounted to 7.2 percent of total Bank lending to Ecuador during that period. During the same period, the Bank lent an additional \$300 million for other projects in the financial sector. In addition, the Inter-American Development Bank provided financing of \$100 million in 1991, particularly for small and medium scale enterprises, and USAID has also provided financing for the sector.

1.2 The SSE lending took place in the context of a growing dialogue between the Bank and the Government on financial sector and industrial policies, which led to the initiation of policy based lending in the mid-1980s. Three of the four SSE projects have been evaluated by the Region, in Project Completion Reports, and by OED, through Performance Audit Reports (PARs), using traditional measures of success for such projects. This impact evaluation attempts to measure the medium term impact of all the Bank interventions—lending and non-lending—on the beneficiary SSEs and on the financial sector and the participating financial institutions (PFIs).

The projects

1.3 The principal aim of the SSE projects was to increase substantially the availability of term financing for small firms, particularly those in the manufacturing sector. In the 1980s, small firms had scarce access to medium or long term loans to purchase machinery, expand existing installations or finance working capital. This market failure was attributed mainly to disequilibrium in the financial sector caused by poor public policy (artificially low interest rates imposed by the Central Bank) and lack of experience of both the firms and financial institutions in identifying and designing projects to be financed.

1.4 To address this market failure, the Bank projects aimed to provide a large increase in the supply of funds for term financing. The later projects also included some policy conditionality and were implemented in conjunction with programs designed to encourage the government to liberalize the financial sector and interest rates. Lastly, the credit programs included technical assistance to improve the efficiency of the apex institution, FOPINAR, and to enable more financial institutions to participate in the program and begin lending to small firms. It was hoped that once a positive financial climate was established, and after the PFIs became experienced in lending to small firms, term financing for such firms would become available in the traditional financial market.

1.5 Included in the stated aims of the credit projects were a host of secondary objectives concerned with poverty alleviation and economic growth. It was thought that by providing credit to small firms (which were assumed to be labor intensive), especially outside of the major urban centers, jobs would be created at low cost, resulting in improved income distribution and poverty alleviation. Credit would be used to modernize firms through the purchase of machinery or to

¹ The definition of SSEs varies. In the case of these loans, SSEs were defined in terms of an upper limit on fixed assets in US\$ (see Table 2.1). Under Ecuadorian law, SSEs had fixed assets of no more than 420 million sucres (approximately US\$125,000).

improve product quality and efficiency through the use of technical assistance. Credit could also be used for free standing working capital to employ excess capacity and expand production. Thus, the four credit projects had additional goals such as the generation of employment in manufacturing, improved value added, diversification and increased efficiency in the small scale manufacturing sector.

1.6 Spin-off effects were supposed to occur in the public and private institutions of the financial sector as well. FOPINAR was expected to develop into an important second-tier institution providing leadership and guidance to the PFIs through efficient disbursement of funds, supervision and training of personnel in charge of the SSE credit in the PFIs. The PFIs in turn would be strengthened through the injection of funds, expanded clientele base, and experience of term lending to SSEs.

Previous findings

1.7 The Performance Audit Report (PAR) for SSE I and II (World Bank, 1989a) concluded that both projects were highly successful in meeting their objectives on term lending and institution building. It concluded that "In terms of design, execution and supervision, the Bank's SSE projects in Ecuador have been highly successful—possibly the most successful of all the Bank's...SSE projects worldwide." This is a view that was shared by the World Development Report on finance (World Bank, 1989b). In a sense, then, the SSEs projects under review here are thought of as some of the most successful of all SSE projects. From a financial perspective, the analysis in this report suggests that those evaluations were premature.

1.8 On the other hand, project objectives in terms of employment creation, the proportion of subloans going to micro-enterprises and the regional dispersion of subloans were met or exceeded, and the institutional development impact of both projects was considered to be substantial, in the light of the development of FOPINAR into an efficient, well staffed and effective institution. However, the PAR noted that the projects were undertaken within a framework of macroeconomic and sectoral policies that substantially undermined their effectiveness, making it difficult for success of the two projects in technical terms to be unambiguously equated with success in overall economic terms. The achievement of rapid commitment and disbursement of funds, coupled with low arrears on repayments, was partly attributable to repressed interest rates and the implicit heavy government subsidization of subloans to final borrowers.

1.9 The PAR for SSE III found that the project was relevant, achieved its resource transfer objectives, and accomplished substantial institutional development. But these gains must be weighed against the costs of highly negative real onlending rates. These resulted in substantial resource transfers to subborrowers and participating financial institutions and contributed to the Government's already excessive external public debt. For all three projects, it is estimated that the foreign exchange losses amounted to over 70 percent of the total loan amount.

1.10 SSE IV was fully disbursed and the project closed by June 30, 1996. For the purposes of this impact evaluation, beneficiaries from only the early years of the project were included in the survey sample.

The plan of the study

1.11 The impact evaluation is organized in the following manner. Chapter 2 describes the direct and indirect instruments used by the World Bank that had an impact on SSEs; these included not only the SSE credit projects, but also economic and sector work, the Bank-country dialogue, and other financial sector lending. The discussion is placed in the framework of the economic and policy environment during the period under consideration. Chapter 3 evaluates the performance of beneficiaries of the loans compared to that of non-beneficiaries and assesses the effect of the projects on employment, output and efficiency within the firms; it is based on a survey of 145 enterprises that borrowed under at least one of the four SSE loans, and a control group of 73 enterprises that did not.² Chapter 4 reports on the impact of the Bank interventions on the financial sector and its ability to provide credit for SSEs; it includes the results of structured interviews with a sample of PFIs, which gathered information on the effect of the credit program on the PFI lending portfolio and the evaluation of the program from the private institutions' perspective. The final chapter presents the study's conclusions on the impact and sustainability of the World Bank support for SSEs in Ecuador and the lessons of experience.

² Annex 2 describes the sample characteristics and data limitations.

2. The Policy Dialogue and Lending Program¹

2.1 The impact of World Bank programs on the SSE sector in Ecuador goes far beyond the four SSE projects. The country dialogue, supported by economic and sector work, as well as by the lending program, has concentrated on issues that have a fundamental influence on the environment in which Ecuadorian industries operate: the level and structure of interest rates, the foreign exchange rate and trade policy, and the price of petroleum products.

2.2 *The need to reform.* The oil boom of the 1970s, while allowing GDP to grow at a real annual rate of almost 8 percent throughout that decade, also created significant macroeconomic imbalances. The 1981 Country Economic Memorandum contended that the fundamental cause of the problem was the country's inward-looking, import substituting development strategy. Growth of the industrial sector was constrained and distorted by the small size of the domestic market and by an inadequate supply of intermediate goods. The CEM concluded that in order to maintain even a modest level of economic growth, the Government must, *inter alia*, liberalize interest rates and move toward lower and more uniform import tariffs.²

2.3 *Early SSE involvement.*³ The Bank had explored prospects for an SSE project as early as 1972, but such a project was precluded by interest rate policies—a ceiling of 9 to 12 percent for SSEs—and by slow progress in disbursing an existing USAID credit. By 1977, the SSE sector had grown, term resources had begun to dry up, monetary authorities indicated a willingness to reconsider the interest rate ceiling for SSEs, and government interest in promoting the growth of the SSE sector increased. The Bank agreed with the Government that SSEs could make an important contribution to growth and employment.

2.4 *Diagnosis: lack of credit.* The Staff Appraisal Report (SAR) for SSE I (World Bank, 1980) stated that one of the most serious problems facing SSEs was a lack of credit, particularly long-term. A survey of 555 firms in the Quito area found that only 59 percent of them received short-term credit in 1979, whereas 70 percent used some form of self-financing. Of the total credit, 12 percent was long-term, and most of that went to the relatively large firms. The debt/equity ratio of SSEs was 0.5 - 1, compared to 1 - 1.7 for medium and large firms. Given the structure of interest rates, with ceilings on lending rates and unattractive deposit rates, small firms were at a disadvantage compared with larger ones that provided commercial banks with profitable collateralized business (e.g. letters of credit, guarantees).

¹ Figure 2.1 provides a graphical summary of the narrative in this chapter, showing real interest rates and major events, along with the approximate period of disbursement of each of the SSE loans. The real lending rates in Figure 2.1 correspond closely to the rates paid by borrowers under the Bank projects (see Figure 3.4). Annex 1 presents a more complete description of the macroeconomic and financial sector events referred to only briefly in this chapter.

² A study of effective protection was scheduled for 1981, with a program of action to be developed by early 1983, but it was repeatedly delayed and was only made available, minus the program of action, in 1985 (Parot, 1985). This study provided a basis for the 1986 tariff reduction in the context of the Industrial Finance project.

³ During the 1970s, the Bank approved four loans for lines of credit through development finance companies (DFCs). The Project Completion Report (PCR) for the third and fourth of these projects (World Bank, 1995a) found that by the early 1980s, DFC weaknesses were being aggravated by inadequate financial sector policies and weak supervision by regulatory authorities.

Figure 2.1: Ecuador: Real Deposit and Lending Rates, 1980-96, quarterly



Note: Dates of SSE loans are approximate.

Source: IMF database.

2.5 In response to these concerns, the objectives of SSE I were to ease the scarcity of term finance; to improve the banking system's capability to promote, appraise, and supervise small scale lending operations on a profitable basis; to provide a structure of interest rates for SSEs more consistent with market rates, risks and costs; to expand institutional and financial capacity to deliver technical assistance; and to help SSEs improve the quality and thoroughness of their investment planning. The project, considered a pilot, consisted of a US\$20 million line of credit, to be used mainly to finance fixed assets. (Table 2.1 provides a summary description of the four SSE projects discussed in this report.) The Government lent the money through the Central Bank (BCE) to the National Finance Corporation (CFN), a second-tier financial institution, within which the Fund for the Development of Small-Scale Industry and Artisans (FOPINAR), was created to finance SSEs and artisans through financial intermediaries. The demand for funds was evident: SSE I was disbursed one and a half years earlier than expected.

2.6 The SAR for SSE II (World Bank, 1982) reiterated and expanded on the earlier objectives: to relieve the scarcity of term financing to SSEs; to create economic growth and employment, especially in smaller cities; to encourage the expanded use of domestic raw materials; and to strengthen CFN and FOPINAR. The project comprised a US\$39.8 million line of credit (double the amount of SSE I in view of the quick disbursement of the latter), mainly for fixed assets, and \$200,000 in technical assistance to CFN.

2.7 *Institutional set-up.* The two most contentious issues, and those which absorbed much of the Bank's attention during the first two projects, were turning FOPINAR into an autonomous institution (independent from both the BCE and CFN) and establishing interest rate spreads that would make the Bank money attractive to commercial banks. Subloans were denominated in sucres, with the interest rate remaining fixed for the life of the subloan. Interest rates for PFIs were adjusted periodically by the Monetary Council, and spreads were fixed. The resulting final rates to borrowers were assumed to be the "market" rates, i.e. the rates prevailing at the time.

2.8 *Intensifying the dialogue and initial reforms.* The Fifth Development Banking project (DFC V, approved in 1982) opened the door to a dialogue on financial sector issues. Among the project's objectives were progress towards a flexible and market-oriented interest rate regime and promotion of a dialogue on industrial policy reforms through a planned study on industrial incentives. The Government and the Bank agreed to hold a mid-term review of the project's interest rate regime.

2.9 Also in 1982, a Bank mission visited Ecuador at the Government's request to support its efforts to reform industrial policy in the wake of falling oil prices, the debt crisis and the resulting recession. The Government sharply devalued the sucre (but with a dual rate and extensive new quantitative import restrictions), with subsequent regular adjustments, and took other steps to stabilize the economy, in compliance with an IMF Stand-by. However, an economic mission that visited Ecuador in 1983 (World Bank, 1984) noted again the continuing high effective protection for the manufacturing sector, as well as the subsidization of credit, and recommended more uniform tariffs, export incentives, and continued regular adjustment of the exchange rate. An internal Bank memo suggested that the Bank should not lend for new projects with credit components until adequate steps were taken in the area of financial reform.

Table 2.1: Summary of World Bank SSE projects

<i>WB Small Scale Enterprise Loans:</i>	<i>SSE I</i>	<i>SSE II</i>	<i>SSE III</i>	<i>SSE IV</i>
Effective Date	4/1/81	7/25/83	12/15/86	10/26/90
Closing Date	12/31/84	6/30/87	12/31/92	6/30/96
Size of Loan	US\$20 m	\$US 39.8 m	US\$29.8 m	US\$50 m
Sub-Loan Eligibility Criteria and Policies				
Maximum Firm Size	fixed assets ≤US\$350,000	fixed assets ≤US\$350,000	fixed assets ≤ US\$200,000	Fixed Assets ≤ US\$200,000
Firm Activity	mainly in manufacturing	mainly in manufacturing	manufacturing, agroindustry, tourism, fisheries or related activities	same as III
Sub-Loan Purpose	emphasis on fixed assets	emphasis on fixed assets	fixed assets and working capital	same, but includes credit for technical assistance
Maximum Sub-Loan	US\$300,000	US\$300,000	US\$350,000	\$85,000 limit of accumulated credit to firm
Interest Rates				
Micro Firm	up to 12%	up to 15%	positive real interest rates established periodically	readjustable market rates
Small Firm	up to 16%	up to 19%	same as micro	same as micro

2.10 The Bank's policy dialogue with the Government intensified in 1984, following the election of the Febres-Cordero Government. The new Government favored a market orientation, with minimal government intervention, recognized the strategic role of prices, and was committed to developing the private sector. Its actions included further devaluation, a unified exchange rate, the lifting of price controls, an improved interest rate structure, and trade liberalization. The results of the shift in policy perspective were a sharp reduction in inflation, a public sector fiscal surplus, external balance, and a recovery of per capita income growth. By the end of 1984, real interest rates had risen to less negative levels.

2.11 *Warning signs.* A Bank report (1985b) that grew out of the mid-term review of the interest rate regime under DFC V focused attention on the major issues of resource mobilization and interest rate policy. The report pointed out that Ecuador's "financial system has been repressed by ceilings on deposit and lending rates. These ceilings led to a poor record of domestic resource mobilization and a dependence on foreign lending guaranteed by local intermediaries; when the recession developed and devaluation became necessary these guarantees placed great pressure on the intermediaries." The report noted that limitations on interest rates encourage financial intermediaries to concentrate their lending on their best clients—those with the most assets and the largest guarantees—to the detriment of small and medium borrowers. It also noted that the Central Bank had taken an excessive role in credit allocation. The report offered suggestions for a new set of financial sector policies to deal with the new environment, including positive real interest rates; more frequent changes in interest rates, or variable rates; and the introduction of capitalization of interest in long term contracts. The regulation needed to implement a law permitting adjustable interest rates was issued in January 1986.

2.12 *Results of SSE lending.* The Performance Audit Report (PAR) for SSE I and II (World Bank, 1989a) concluded that both projects were highly successful in meeting their objectives on term lending and institution building. Through the two loans, FOPINAR financed a total of 3,762 subprojects (compared to appraisal targets of 1,825), at a total cost of US\$57.4 million equivalent. An estimated 22,000 jobs were created, more than double the estimates at appraisal.⁴ FOPINAR estimates of economic rates of return on a sample of subprojects ranged from 13 to 96 percent.

2.13 Despite strong Bank efforts, however, ex ante interest rates to final borrowers were not adequately adjusted for inflation—they were in fact highly negative at times—and were therefore subsidized by the Government. As a result, the basic objective of the projects as identified in the appraisal reports—i.e., to relieve the scarcity of credit—could not be achieved. Heavily subsidized credit is not sustainable; nor is it strictly speaking finance. Negative real interest rates also strongly discouraged domestic resource mobilization. Moreover, Ecuador's high tariffs and wide-ranging quantitative restrictions had favored the growth of an inefficient manufacturing sector. The institutions were well designed, but the projects were undertaken within a framework of macroeconomic and sectoral policies that undermined their effectiveness from the start. Nonetheless, the belief that distortions in the structure of production were far less acute for SSEs than for larger enterprises was used to justify directed lending for SSEs. Evidence presented in this report will show that this was not the case.

⁴ Estimates based on FOPINAR's data base show an even higher level of employment creation (see Table 3.2). These estimates are misleading however (see Chapter 3 and World Bank, 1989b).

2.14 *Access to credit.* During SSE I and II, according to one estimate (White, 1989), the increase in SSE lending through FOPINAR (i.e. World Bank funds) was accompanied by a greater fall in credit supplied from other sources: altogether, total credit to small industrial enterprises fell by 5 percent in real terms over the period 1981-87.⁵ This evidence is consistent with the view that FOPINAR credit simply substituted for bank credit that had previously been available. Thus, it would appear that FOPINAR lending had no effect on credit availability for SSEs. However, the report nevertheless concluded that access to credit was the major problem confronting SSEs and that without FOPINAR, they would have had virtually no access to term financing through the banking system. Evidence presented below will support the first interpretation.

2.15 *Renewed optimism.* Preparation of SSE III began in 1984, just after the election of the Febres-Cordero Government, at a time of improving macroeconomic conditions and real interest rates that were nearing positive levels. The SAR (World Bank, 1986) was optimistic about the future, in view of the Government's actions during the 1983-85 period. It predicted that the best prospects were for industries with low indebtedness, based largely on local inputs, serving export markets or local markets for basic consumer items, characteristics shared by most SSEs. The SAR also noted that in practice, industrial incentives may have discriminated against SSEs, which had more limited access than did larger firms to subsidized credit, were assumed to have relatively low capital intensity and which purchased inputs locally; only one-quarter of SSEs were registered for available benefits, and only 10 percent of those registered actually used the benefits in 1983.

2.16 *Policy lending begins.* The project aimed to relieve the scarcity of term financing for SSEs and to continue strengthening FOPINAR. It included a \$29.8 million line of credit and \$200,000 for technical assistance to FOPINAR and, through long-term lending, to the SSEs. Based on the experience of the first two loans, SSE III was the first such loan to include sector policy objectives: lending rates for industrial sector loans over two years were to be maintained at positive levels in real terms, with the rates to be reviewed by the Bank and the Government semi-annually. Failure to maintain lending rates at positive levels, and, after mid-1987, at adequate levels relative to deposit rates, would be grounds for suspension. The dialogue with the Government on resource mobilization and interest rates, issues critically affecting the environment in which SSEs function, was considered a principle benefit of the project. Negotiations took place jointly with those for the sixth DFC project, known as the Industrial Finance project (IFP), which included a US\$50 million policy component (in addition to a \$65 million credit component), to be disbursed after the Government introduced a revised import tariff structure, removed about 20 percent of the import prohibitions, and shifted from fixed to variable interest rates for industrial sector lending.

2.17 *Political and economic shocks.* Shortly after Board approval of the two projects in March 1986, however, the Febres-Cordero Government lost a crucial mid-term election, the economy was devastated by falling oil prices, and an earthquake ruptured the main oil pipeline, stopping oil flow for five months. In an atmosphere of growing hostility to reform, the Minister of Finance was impeached by Congress (now controlled by the Opposition) for adopting IMF conditions on floating exchange and interest rates, raising electricity prices and reducing import restrictions. Ecuador failed to comply with the fourth and several subsequent IMF Stand-bys,

⁵ Credit to medium and large scale firms rose by 67 percent in real terms during the same period.

and many earlier reforms were reversed. Beginning in late 1986, real interest rates became negative again, and non-compliance with the interest rate covenant led in early 1988 to a year-long suspension of commitments under the IFP. Disbursements under SSE III were not suspended, however, because of concerns with the possible serious negative impact on SSEs, which were assumed to have no other source of finance; about a third of the SSE III funds were therefore disbursed during a period of highly negative interest rates.

2.18 *Results of SSE III.* SSE III funded 1,941 enterprises, close to the appraisal target. According to the PAR, however, job creation under the project reached only 9,030, well under the 18,000 anticipated at appraisal; this was attributed at least in part to the fact that most subprojects supported modernization or reduction in idle capacity of existing facilities (World Bank, 1995). Chapter 3 of this report presents yet a different picture, one which shows high initial job creation, but which questions the sustainability of these jobs. The technical assistance component was used mainly to help PFIs and SSEs prepare loan applications.

2.19 *Adjustment lending.* The Financial Sector Adjustment Loan (FSAL), approved in 1987, was one of the first four FSALs in the Bank and, along with an agricultural sector loan, the first major policy operation in Ecuador. The most comprehensive attempt to link various initiatives for financial reform in a single, coherent package,⁶ its objectives were to strengthen financial institutions by improving the regulatory framework and upgrading the performance of the Superintendency of Banks (SB); to increase the efficiency of intermediation; and to develop capital markets by improving conditions for undertaking adjustable rate lending, capitalizing interest, and increasing equity finance.

2.20 *Political and policy reversals.* Shortly after FSAL effectiveness, the 1988 presidential elections brought the opposition party to power, along with a more interventionist approach to financial sector policy. The Borja Government opposed market-based reforms, particularly in the financial sector, and proceeded to reverse some aspects of the reform, notably by placing ceilings on some interest rates. FSAL implementation problems were particularly acute with the conditions calling for a supportive macroeconomic environment and those concerning the frequency and degree of adjustment of onlending rates on lines of credit. The second tranche of the FSAL, with only 2 of 17 conditions met by the initial review in June 1988, was renegotiated; three conditions were waived, allowing, *inter alia*, a more gradual reduction of interest rate subsidies for SSE lending, and disbursement took place more than a year late. The Government did, however, fulfill its commitments to rehabilitate troubled financial institutions, reduce the volume of BCE credit, and remove interest rate ceilings on variable rate lending (World Bank, 1992). Meanwhile, the 1988 CEM recommended consolidating the development of the financial sector through continued market pricing of financial assets and credit, reduced volumes of credit from BCE, strong supervision of the capital adequacy of financial institutions, and extension of interest rate liberalization to adjustable rate assets.

2.21 *Access to credit is still an issue.* The SAR for SSE IV (World Bank, 1990a) asserted that SSEs had generated virtually all of additional manufacturing employment during the 1980s and that the country's comparative advantage lay in unskilled labor intensive, domestic resource based sectors, with relatively low average effective protection, where SSEs were heavily concentrated (food processing, textile and leather products, wood and furniture, and metal

⁶ During the 1984-86 period, four loans had included conditionality to raise interest rates on foreign funds to the sectors concerned and to reduce preferential Central Bank credit: two agricultural loans, SSE III, and the IFP.

products).⁷ Factor markets were also thought to be less distorted for SSEs, which used less credit, and for whom labor laws were not applied as stringently. The main constraints in lending to SSEs were believed to be limited funding, high costs of credit delivery, high perceived risk, and inadequate collateral and accounting information, factors which were aggravated by the ownership structure of the financial sector, with its close relationship among banks, development finance companies, and large industrial and commercial groups. The Government was planning to reform industrial incentives, liberalize trade, and reduce factor market distortions, with assistance from the Bank through the forthcoming manufacturing sector study, and these reforms were expected to encourage labor intensive production. The SAR also noted that there was still no active, coordinated technical assistance for SSEs, FOPINAR's assistance so far having concentrated on training the PFIs to prepare and appraise subloans.

2.22 Like the earlier projects, SSE IV aimed to facilitate access of SSEs to formal credit, to promote lending to SSEs by PFIs and to strengthen the PFIs. For the first time an SSE project sought to provide technical and managerial assistance to SSEs themselves. It also set a much lower limit to loan size: \$85,000 total accumulated credit to any one firm or individual, compared to the individual loan limit of \$350,000 under SSE III. The project included a \$50 million line of credit and \$1.6 million of TA to be financed by CFN and the Inter-American Development Bank. Through the latter component the project would help FOPINAR offer TA to small entrepreneurs. Learning from the experience with negative interest rates of earlier loans, SSE IV introduced an adjustable interest rate on subprojects, to be adjusted every six months so as to eventually reach the market-determined commercial bank rate by June 30, 1992 (two years into the project and 12 years after SSE lending had commenced⁸). An interest rate capitalization scheme was to be offered to subborrowers to prevent cash management problems arising from high nominal interest rates. Despite the lengthy policy dialogue that had preceded this project, the Government still wanted to subsidize SSEs and agreed to adjustable rates only after prolonged discussions. Subsequent Bank supervision of the project concentrated on problems with disbursements, and did not pay much attention to the policy aspects of the project.

2.23 *Political change and renewed liberalization.* The Duran-Ballen Government, elected in 1992, introduced a new stabilization package, fully liberalized commercial interest rates, and proposed the elimination of the financial intermediary role of the BCE. The vice-president, and architect of the reforms, was the man who had been impeached as Finance Minister in 1986. The Private Sector Development project (World Bank, 1993), while not an adjustment loan, acknowledged the record of projects affected by vacillating policies by including a clause to guard against the reversal of policies previously adopted, even when not part of its own conditionality. After a year of effectiveness or one-third of the loan had been committed—whichever was sooner—new commitments would pause pending a review by the Government and the Bank of trade and financial policies, and would only resume following a positive assessment of adherence to the agreed reforms. During supervision, however, the Bank focused

⁷ Actually, a World Bank report on the manufacturing sector (1990b) found that these subsectors—with the exception of metal products—had some of the highest rates of nominal protection in 1989. The manufacturing sector as a whole had a nominal protection of 33 percent, whereas food, textiles, leather, and wood products ranged from 58 percent to 90 percent. Quantitative restrictions (prohibitions) in these subsectors were also well above the average. By 1996, the average tariff was 11 percent, with a range from 5 to 20 percent—with the exception of automobiles, at 37 percent (World Bank, 1996a).

⁸ In contrast, adjustable rates were introduced into SME lending in Sri Lanka in 1981 (SME II).

its attention on the role of CFN and did not seriously follow up on this aspect of the project. Actions agreed during project preparation included the liberalization of lending interest rates and the elimination of BCE subsidized loans. In fact, real interest rates on FOPINAR loans have been positive, increasingly so, since 1991.

2.24 *Additional shocks and economic uncertainty.* Additional shocks in 1995—a border conflict with Peru, a drought-induced electricity crisis, and another political crisis (leading to the resignation of the vice president)—put pressure on the economy. A combination of poor fiscal management and monetary policy focused on inflation control helped drive real interest rates to high levels, weakening the productive and financial sectors. FOPINAR rates rose to over 20 percent (in real terms) in 1995, and SSE IV was fully disbursed by 1996. The election of a populist president in 1996 and his dismissal the following year have created major uncertainty at present for Ecuador's economic policy.

2.25 *Conclusions.* Ecuador's four SSE projects took place during a period of intense policy dialogue, supported by economic and sector work and, eventually, by lending conditionality. The policy dialogue did not, however, lead to a consistently better policy environment until well into the third project.⁹ The projects for the most part were not used as vehicles to promote the dialogue, nor, until quite late in the process, did they reflect any benefits from the dialogue. The first two SSE loans concentrated almost exclusively on institutional issues, despite the fact that the financial climate was critical to a successful economic outcome. As the Government became more amenable to policy reform, the third and fourth SSE loans contained some policy conditionality, following the lead established by the FSAL and other loans. However, it was only with SSE IV that interest rates remained consistently positive.

2.26 The argument in favor of directed credit for SSEs was that it addressed a market failure: the commercial banks lacked adequate information to lend to small enterprises in the absence of collateral or credit histories, but once they learned to deal with them, the need for the directed credit would be eliminated. Evidence presented below, however, does not support this assumption. Such market failures may well have existed, as suggested by Jaramillo, et. al. (1993), but the distortions of government policy failure were almost certainly greater.

2.27 A second argument was the belief that in Ecuador SSEs faced a less distorted incentives environment than did larger enterprises and that enabling them to grow would therefore encourage a more efficient industrial sector. It is not clear that these assumptions were valid, however. Protection was high in subsectors where SSEs were concentrated (see para. 2.21) and labor costs did not vary greatly by firm size.¹⁰ The survey undertaken for this impact evaluation indicates that although beneficiaries generated productive jobs, the high rate of failure and overcapitalization diminish the expected results in terms of labor intensive growth.

⁹ A policy index developed by Burnside and Dollar (1997) provides a measure of the effect of openness, inflation and budget surplus on the policy environment. The index is constructed so that 1 point is equal to a policy change that should generate an increase of the growth rate of 1 percent. Its mean is 1.3, with a standard deviation of 2. The policy index for Ecuador was 1 through 1981; it fell to 0.25 during 1982-85 and to 0 during 1986-89. Only in the early 1990s did it recover to 0.75. Thus, according to this measure Ecuador's policy environment has not been conducive to effective projects throughout the period.

¹⁰ Evidence from the survey indicates that earnings of unskilled production workers increase only slightly with firm size.

2.28 Finally, SSE lending was expected to support the Government's employment, income and geographic redistribution objectives. While progress was made towards these objectives, the evidence presented below indicates that these loans were not an efficient means of achieving any of them.

3. Impact of Bank Support for SSE Lending on the Firms

3.1 This chapter assesses the performance—in terms of productivity, efficiency and growth—and the financial health of the firms that borrowed money through FOPINAR under the series of World Bank SSE projects (referred to here as FOPINAR firms). Using the results of a survey, the performance of a sample of FOPINAR firms is compared to the performance and financial standing of non beneficiary firms of approximately the same size. Before discussing the results of the survey, however, it is useful to review briefly the setting in which the projects took place—the development of the manufacturing sector, and SSEs in particular, during the 1980s and 1990s.¹¹

Trends in manufacturing SSEs: early 1980s to the 1990s

3.2 The macroeconomic policy environment for the first three loans was based on oil revenue financing large external borrowings, heavy protection, and little effort at domestic resource mobilization. This regime provides the context for a marked stagnation of Ecuador's manufacturing sector during the 1980s, following strong growth in the previous decade. What limited manufacturing growth there was resulted mainly from domestic market demand, with industrial exports playing a minor role. On the supply side, the growth was generated mainly by capital accumulation, with modest employment generation, and low or negative growth of total factor productivity (World Bank, 1990b). During the 1990s, the policy regime changed. Trade and financial market liberalization were initiated, and a new free trade zone was established with Venezuela and Colombia at the beginning of the decade.

3.3 The Government's development plans during the 1970s identified SSEs as a crucial sector for the generation of growth and employment in Ecuador. The manufacturing sector in 1980 consisted of over 34,000 firms, of which close to 99 percent were SSEs (defined here as firms employing up to 50 workers).¹² However, although these enterprises employed over one-half of the 187,000 workers, they produced less than 30 percent of manufacturing value added (White, 1989).¹³ Microenterprises alone, with fewer than five workers, accounted for 86 percent of the total establishments, 30 percent of employment and a mere 10 percent of value added. Almost four-fifths of manufacturing employment (83 percent for SSEs) was concentrated in four subsectors: food, beverages and tobacco; textiles, clothing and leather; wood and wood products; and fabricated metal products, machinery and equipment.

3.4 Consistent with the overall policy perspective, government support for SSEs in the first three projects relied on foreign capital, rather than domestic resources, to fund small protected producers of goods sold on the domestic market, through directed lines of credit, at deeply negative and controlled interest rates. In this policy environment, it is perhaps not surprising that in the early 1990s the structure of the industrial sector was still dominated by the same manufacturing subsectors. The relative importance of food and beverages had declined by 10

¹¹ The macroeconomic and financial sector background is presented in annex 1.

¹² FOPINAR lent to 16,457 firms between 1981 and 1995, representing a high coverage of firms in Ecuador.

¹³ These figures come from the 1980 Census carried out by the National Statistics and Census Institute (INEC).

percentage points, and other consumer goods such as textiles and apparel had fallen in importance, probably as a result of the lower level of protection.¹⁴ However, for SSE firms, value added by activity has changed dramatically. The share of food and beverages in total SSE value added suffered a significant decrease over time, metal products tripled their relative importance, representing more than 50 percent of total SSE value added by 1994. The other two sectors taken together accounted in 1994 for less than 10 percent of SSE value.

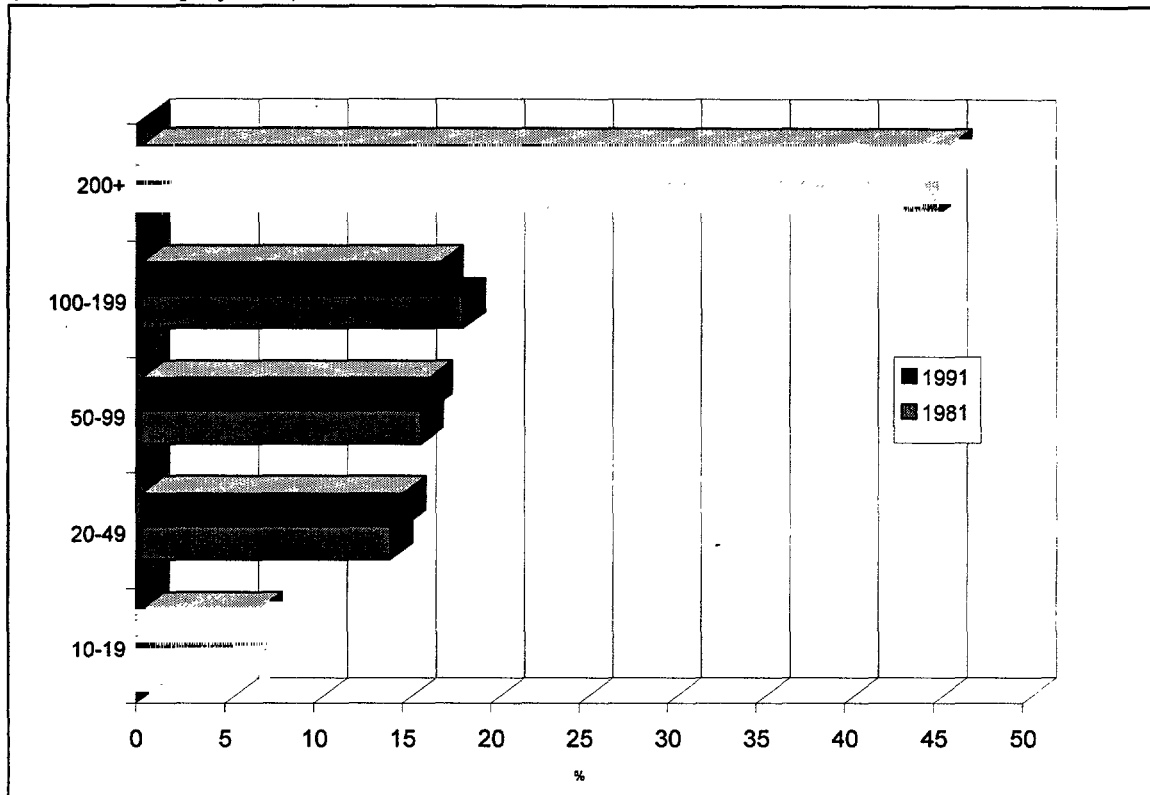
3.5 It is difficult to determine the exact number of workers employed by very small firms.¹⁵ However, it does not appear that small firms have been very dynamic. Figure 3.1 compares the structure of manufacturing employment in 1981 and 1991 by size of firms for firms with 10 or more workers (information on manufacturing employment relies only on annual surveys after 1980).¹⁶ Employment is concentrated in firms with more than 200 workers, and their share has increased over time. Only the larger of the SSEs (those with more than 20 workers) had some increase in employment in the last decade in Ecuador, as did the very large firms. Thus, most of the firms eligible for assistance experienced contraction in employment during the projects.

¹⁴ No studies have yet measured changes in the level of protection as a result of the trade reform. Arithmetic averages show that consumer goods had a nominal protection of 100 percent in 1985, which dropped to 65 percent by 1989. Overall nominal protection fell from 51 percent in 1985 to 9 percent in 1992 (World Bank, 1990b and World Bank, 1994, Annex B).

¹⁵ The last manufacturing census was undertaken in 1980, when a third of the employment was in firms with fewer than 5 workers. Subsequent data come from annual surveys, which might have become less representative of the entire population of establishments in Ecuador over time.

¹⁶ Total manufacturing employment increased from 103,500 in 1981 to 124,900 in 1991, an increase of less than 2 percent p.a.

Figure 3.1: Ecuadorian Manufacturing Structure, by Firm Size, 1981-91
(% of total employment)



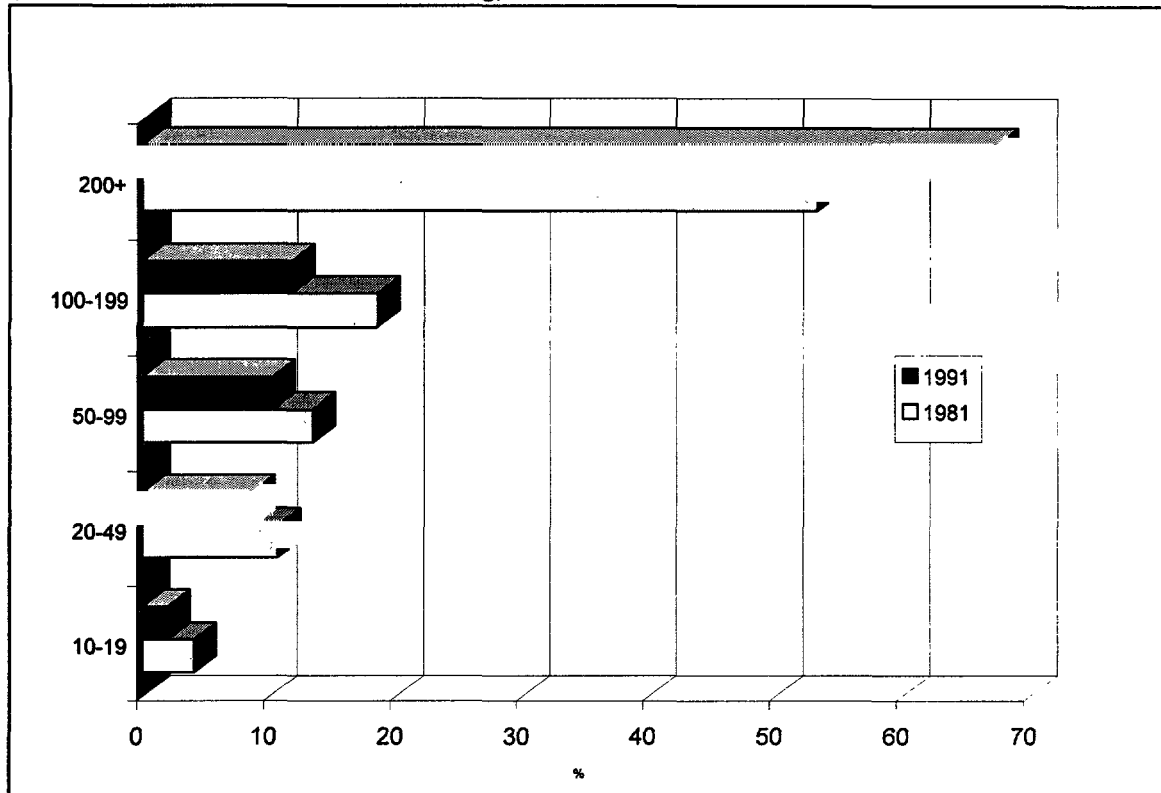
Note: The category of firm size 1-9 is not included in the surveys.

Sources: 1981 and 1991 Annual Surveys of Establishments, INEC.

3.6 While employment data are suggestive rather than definitive, evidence on value added is clearer. Growth in value added has been concentrated in the very large firms: the size category with the largest growth over the period 1981-1991 is the group of firms with more than 200 workers (see Figure 3.2). All other size groups had a shrinking share of value added. This implies that very large firms became more productive, in terms of value added per worker, over this period (larger growth in value added than in employment). Meanwhile, all other firms experienced declining labor productivity (the decline in value added was greater than the change in employment among all sizes).¹⁷

¹⁷Data on total factor productivity are not available for Ecuador, but unpublished evidence for Sri Lanka and the Philippines shows that larger firms have both higher total factor productivity and higher labor productivity.

Figure 3.2: Ecuadorian Manufacturing Structure, by Firm Size, 1981-91
 (% of total value added in manufacturing)



Note: The category of firm size 1-9 is not included in the surveys.

Sources: 1981 and 1991 Annual Surveys of Establishments, INEC.

Results and analysis of a survey of FOPINAR beneficiaries and a control group¹⁸

3.7 Using a survey of 218 Ecuadorian firms (145 beneficiaries and 73 non beneficiaries), we examine three main areas of impact of the SSE projects: employment generation, firm growth and efficiency, and the impact of FOPINAR credit on SSE access to credit more generally. Each of these variables is associated with a series of important questions:

- *Employment generation.* Did FOPINAR beneficiaries generate more employment than did the control group? Was the job generation as high as expected at the time of project appraisal? Was the employment that was generated sustainable? More importantly, were the jobs productive (i.e., did they increase the level of value added per worker)? Were FOPINAR beneficiaries more labor intensive than others, as was assumed at loan appraisal? Finally, were there other gains in equity besides the increased employment of unskilled workers?

¹⁸ The survey was undertaken by CORDES, and its description and analysis is based on Roberts, et. al. (1997).

Annex 2 describes the sampling techniques, the size distribution of the beneficiaries and the control group, and the limitations of the data. In particular, since firms are legally required to keep accounting records for only three years, and many do not even do that, data for the years prior to 1992 are often poor or nonexistent. The sample includes firms that borrowed under all four SSE loans (only the early years of SSE IV), but much of the analysis refers to their experience in the 1990s. The control group consists of firms that did not borrow from FOPINAR.

- *Firm growth and efficiency.* Did FOPINAR credit improve firm performance compared to the control group? Did the objective of geographical dispersion contribute to efficiency?
- *Firm access to finance.* Was credit access advantageous for beneficiaries? Did it provide a breeding ground for growth?

A final set of questions about firms, concerning the impact of FOPINAR on their access to credit, particularly long-term credit, will be considered in the following chapter, which also looks at the financial system more generally.

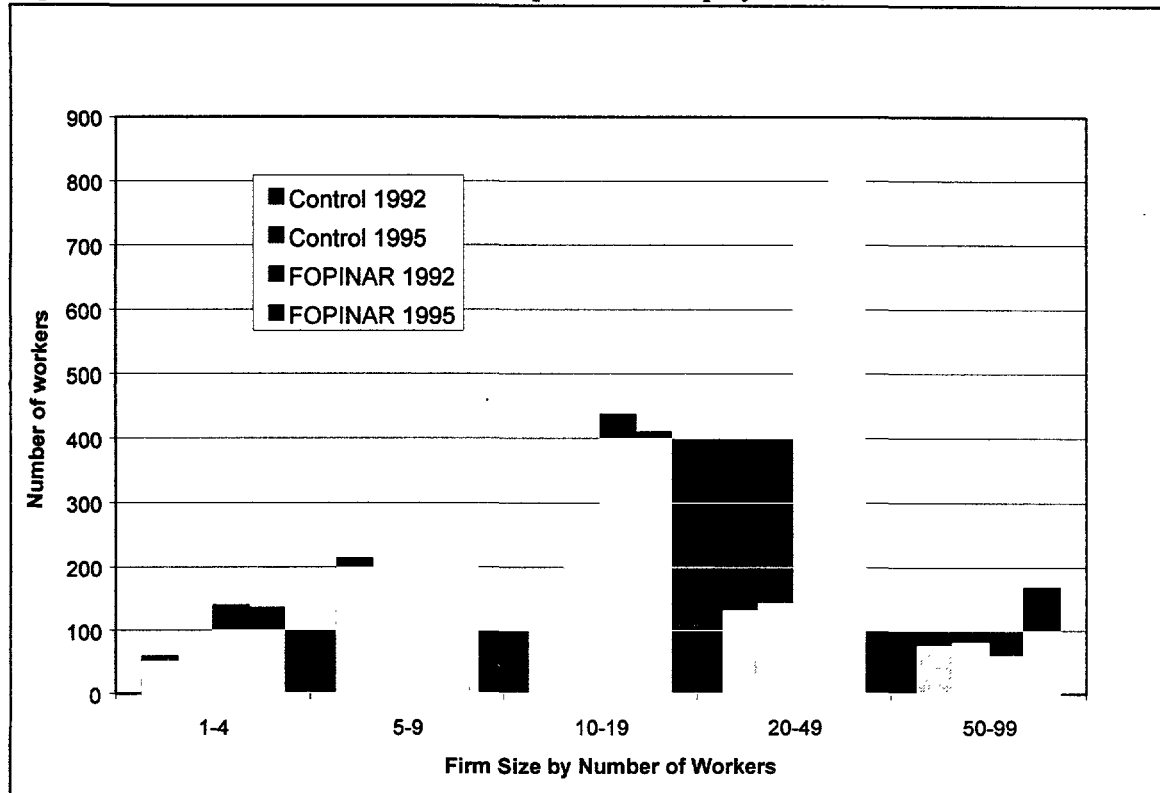
Employment

Did SSE beneficiaries create more employment than non-beneficiaries? Did small firms create more employment than larger firms?

3.8 No. If SSEs were labor intensive, as they were assumed to be, small increases in capital would have produced large increases in employment, *ceteris paribus*. Defining and comparing capital intensity indicators is difficult. However, FOPINAR recipients are *less* labor intensive than the control group, or have similar ratios.¹⁹ The growth of employment was lower in FOPINAR beneficiaries (11 percent growth over the three years) than in the control group (18 percent) between 1992 and 1995, for firms with fewer than 100 workers. Figure 3.3 shows the actual levels of employment by size categories in the sample (up to 100 workers) in 1992 and 1995. Among the beneficiary firms, employment fell for firms of up to 19 workers, which, as noted above, received the bulk of the sub-loans in our sample. These results reflect in part the sluggish performance of employment in manufacturing in Ecuador, especially in 1995. However, the control group performed better, with rising employment in the 10-19 group. Both beneficiary and control firms increased their employment in the 20 workers and above group, but this group represented less than a quarter of the sub-loans.

3.9 Over three-quarters of the sub-loans in our sample went to firms with 19 or fewer employees, whereas during the 1980s, the larger firms in the economy showed considerably more dynamism. As illustrated in Figure 3.1, the employment share of the small firms (10 - 19 workers) fell between 1981 and 1991, while most of the other categories expanded their employment shares.

¹⁹ Information about capital prior to 1992 is missing for most firms, and only 32 firms out of 218 firms reported *all* indicators. Controlling for the time period of the credit, we observe that the capital-labor ratio of firms that received FOPINAR credit between 1991 and 1993 does not appear significantly different from that of the control group in 1992; by 1995, however, the capital-labor ratio of the former is significantly higher. This finding is not surprising, since FOPINAR credit is used mainly to increase fixed assets. More importantly, FOPINAR recipients from earlier loans (1986-90) were not significantly different from the control group by 1992 or by 1995.

Figure 3.3: FOPINAR and Control Groups: Total Employment, 1992-95

Note: Total employment in the FOPINAR group rose from 1631 in 1992 to 1816 in 1995 (11 percent), while for the control group, which comprised fewer firms, it rose from 615 to 724 (18 percent).

Source: Roberts, et. al., 1997.

How durable were the jobs?

3.10 One of the foremost benefits that the SSE projects were thought to have generated was employment. However, our findings contradict this perspective. In addition, we find the methodology underlying previous estimates to be problematical, largely because they ignore issues of job durability.

3.11 Many of the jobs did not last long. The Bank reviews of the projects focused on job creation as one of the main criteria of success, and evidence from FOPINAR files and from the survey of firms indicates that initial job creation exceeded targets, sometimes by a large margin. These estimates tend to assume that all new employment represents new jobs rather than perhaps just different jobs.²⁰ Moreover, a high rate of exit among firms suggests much lower rates of job creation. On average, our data indicate high exit rates among all firms after 8 years (31-44 percent).

3.12 In addition, our results indicate that high exit rates persist over time for FOPINAR. In other Latin American countries, recent firm surveys reveal that survival rates for firms which

²⁰ See the OED Study of SMEs (World Bank, 1991) on the problematic nature of job creation estimates.

survive the first 3 years is almost 90 percent (Roberts and Tybout, 1996). For FOPINAR beneficiaries who took FOPINAR credit after 1992, the survival rate is similar, 88 percent, at the time of our survey (1996). However, the work in other countries found that exit rates fell after the first few years, whereas in Ecuador, exit rates continued at a high level. With much lower survival rates for firms with earlier FOPINAR credits (32 percent for those that obtained FOPINAR credit in the early 1980s, under SSE I and II), the benefits of the program in terms of job creation diminish drastically over time.²¹ In sum, it appears likely that more than half of the jobs generated did not last more than 10 years.²²

3.13 In contrast with this result, previous estimates indicated that all of the SSE projects achieved or surpassed their goals in terms of job creation. Table 3.1 shows the targets at the time of appraisal with respect to the estimated number of beneficiaries (the numbers of loans and new jobs created). These targets are compared to the actual figures from the FOPINAR database. These estimates show that the loans more than met their targets. For sub-projects financed in the early 1980s, job creation was four times the original target. Job creation under SSE III and IV is lower, but still above targets.

Table 3.1: Employment Generation from the Perspective of the World Bank and FOPINAR

	<i>World Bank Targets</i>			<i>FOPINAR Database Estimates</i>			<i>Percent Increase Over the Targeted Job Creation</i>
	<i>Period^a</i>	<i>Loans (1)</i>	<i>New Jobs (2)</i>	<i>Period</i>	<i>Loans (3)</i>	<i>New Jobs (4)</i>	
SSE I and II	1981-87	1,825	10,700	1981-85	4,104	42,763	400%
SSE III	1986-92	2,100	18,000	1986-90	5,318	21,261	18%
SSE IV	1991-96	4,500	14,000	1991-95	9,165	23,035	65%
TOTAL		8,425	42,700		18,587	87,059	104%

a. Period between effective and closing dates of the loan.

Sources: World Bank and FOPINAR database.

3.14 The data in Table 3.1 however, are inaccurate, because the FOPINAR estimates are based on statements about expected job creation made by enterprises applying for a loan, not on actual jobs created. To investigate further the issue of employment creation, we took the FOPINAR estimates of job creation for the firms in our sample and compared these estimates with the changes in the number of employees in the survey of firms. Table 3.2 summarizes the

²¹ Higher interest rates, economic recession, and trade liberalization are some of the possible causes for the high rate of failure among firms, especially after 1993. However, the general point is that in all market economies firms, particularly small firms, exit with some frequency. Exit, however, does not necessarily mean the gains achieved during a firm's life are extinguished. The entrepreneur may move to a more productive area, the equipment may be sold to firms that use it just as well, and the workers who have advanced their skills in this job may get new ones in which these skills are put to just as good use.

²² Given this situation, a measure like "employment years created" might be a better gauge of employment benefits than the number of jobs created.

expected and actual rates of job creation for the 147 FOPINAR firms. The survey figures do indicate that targets were surpassed over time. By 1995, FOPINAR firms had created 43 percent more jobs than they anticipated before borrowing.

3.15 However, the high rates of failure found for SSEs in Ecuador suggest that the initial gains from employment generation can be reduced significantly, making job creation a short-lived phenomenon. Moreover, it is worth looking at the magnitude of the effect at the firm level, for the surveyed firms: only 3.4 jobs created per firm for those borrowing under SSE I and II, and only roughly 1 job per firm under the later loans (see Table 3.2). Finally, as discussed above, the control group created more jobs than did the FOPINAR firms, implying that firms would have hired *more* workers without the FOPINAR credit. Therefore, it is difficult to attribute the job creation that did take place to the FOPINAR program.

Table 3.2: Employment Generation from the Perspective of the Firms

		No of Firms ^a	New Jobs to be Created	Level of Employment:		% Increase over the Projected Job Creation [(3)-(2)] over (1) (%)
				Pre-loan Estimate (1)	Before Loan ^b (2)	
SSE I and II	1981-85	24	44	24	105	84.1%
SSE III	1986-90	62	51	49	109	17.6%
SSE IV	1991-95	61	50	49	117	36.0%
TOTAL		147	146	122	331	43.2%

a. Of these firms, 54 received more than one credit from FOPINAR.

b. In the year of application for a loan.

Source: Roberts, et. al. (1997) based on CORDES' survey of FOPINAR beneficiaries and FOPINAR database.

Were the jobs also productive?

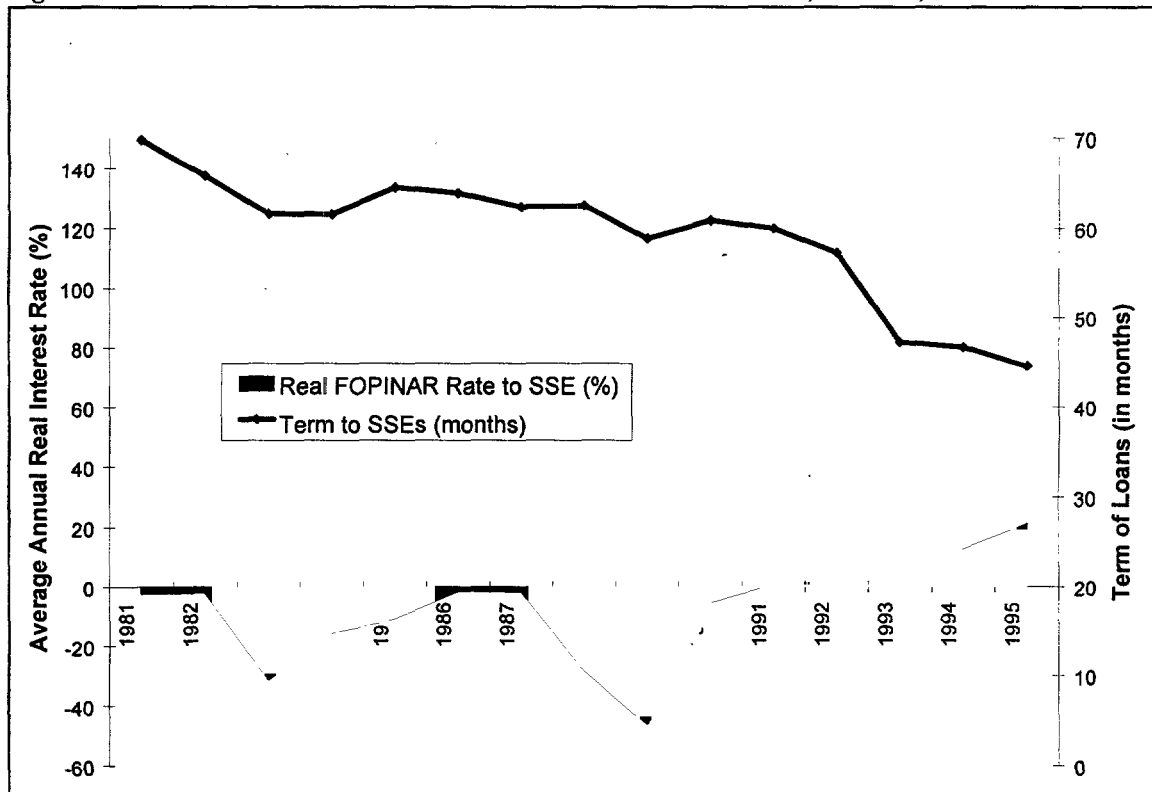
3.16 No. Because of the deeply negative cost of borrowing (see Figure 3.4), the subsidy for beneficiaries per unit of output may have been as high as 15 percent. It is unlikely that value added for beneficiaries relative to that of non-beneficiaries increased by this much.²³ As a result,

²³To provide a sense of how the subsidy compared to the effect of participation in the program, we rely on a production function estimated as background for this study by Roberts, et. al. (1997). Their results indicate that a Cobb Douglas production function, with roughly constant returns to scale, characterizes production of both beneficiaries and non-beneficiaries. Their results also indicate that the coefficient on capital was similar to traditional estimates, ranging from .2 to .3. If factors are paid their marginal products, and borrowers finance say 50 percent of their capital, then the cost of this borrowing should be 13 percent of output, half the midpoint of the estimated capital shares. However, because borrowers face a negative interest rate they not only face a zero cost of capital, they also get a capital transfer for part of their borrowings. Over the 1980-91 period the borrowing rate averaged about negative 13 percent. While this figure is of course an average for the entire period, it is nevertheless the case that for most of the period, borrowers received fixed interest rate loans that carried negative ex ante interest rates, sometimes deeply negative.

One way to estimate this transfer is to assume that it is equal to the annualized reduction in the real value of the outstanding loan, i.e., 13 percent of the cost of capital. In this case the subsidy, relative to output, is equal to the

it is likely that the firms that received subsidies under the projects on net, added value of a smaller amount than the size of the subsidy they received. Figure 3.5 shows that FOPINAR firms have a clear advantage in terms of value added per worker for firms with fewer than 20 workers. This is especially the case in the firm size category of 10 to 19 workers. However, for a subsidy of roughly 15 percent of the cost of output, these results would be all but canceled out, or even reversed, for all but the 10-19 group of firms. Moreover, the 10-19 group as a whole was growing more slowly than larger groups (see Figure 3.2), so the credit was not going to the most productive, rapidly growing large firms, which dominate Ecuador's manufacturing sector.

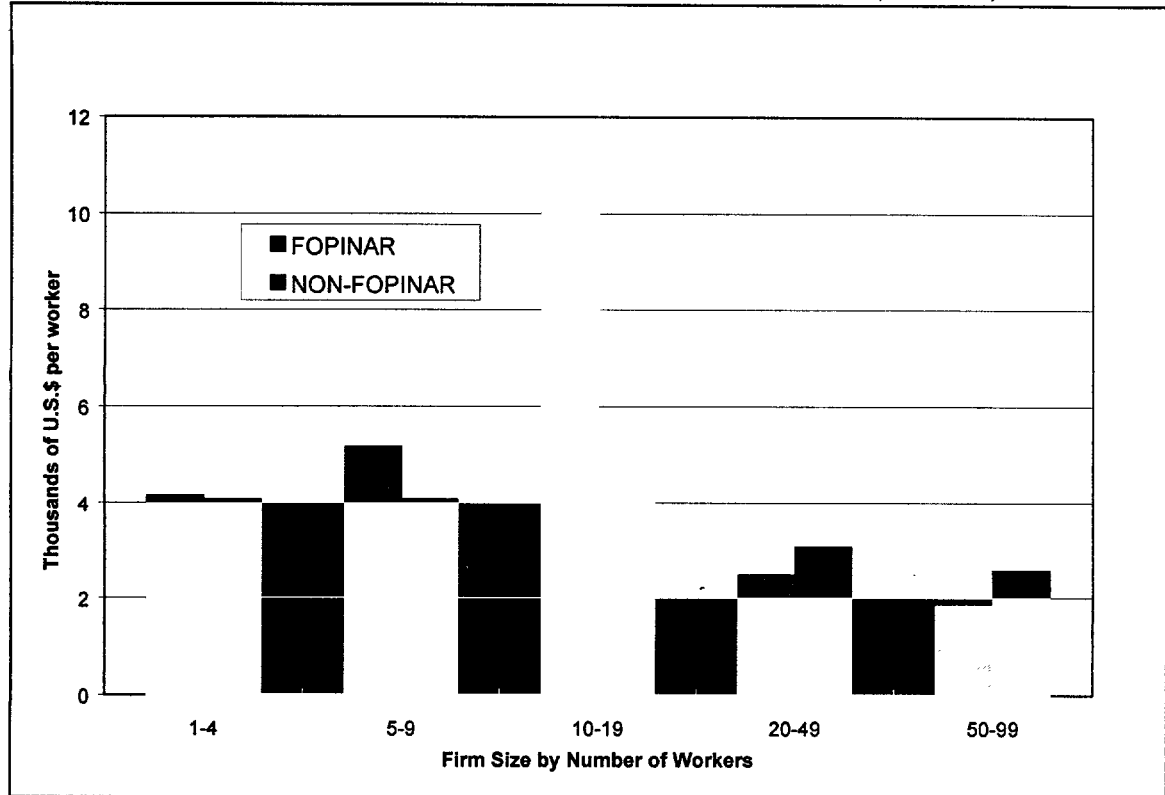
Figure 3.4: FOPINAR Loans to SSEs: Terms and Real Interest Rates, Ecuador, 1981-85



Source: Roberts, et. al., 1997, based on all FOPINAR files.

100 percent reduction in the cost of capital plus the annualized capital transfer, that is, 113 percent of the cost of capital. This result, in turn, implies that an estimate of the subsidy in annualized output flow terms is equal to $1.13 * 0.13 = 14.7$ percent of output. In contrast, the CORDES estimates also suggest that the annual growth in value added of FOPINAR borrowers exceeded that of the non-beneficiaries by only 4 - 9 percent. Thus, even if the subsidy estimate were halved, it would exceed the midpoint of the estimates of the incremental value added by the loans. Hence, it appears likely that the net post subsidy value added was very low, and may indeed have been negative in many cases.

Figure 3.5: Value Added per Worker, FOPINAR and non-FOPINAR Firms, Ecuador, 1992



Source: Roberts, et. al. (1997).

Did the FOPINAR program result in reduced poverty?

3.17 No. While poverty in the cities was reduced to the extent that jobs were created, it is important to remember that non-beneficiaries who received no subsidies created more jobs and that the net post-subsidy value added of the additional FOPINAR workers was very low. Hence, the expenditures would have had more effective poverty alleviation effects if targeted in other ways. The main beneficiaries were not the workers, but the owners (along with the PFIs, as discussed in Chapter 4).

3.18 *SSE credit did not go to the poorest entrepreneurs.* The study of poverty in Ecuador (World Bank, 1996) concludes that poverty is more likely to occur in households with low educational achievement (heads of poor households have on average only 4 years of formal education) and that rural areas are more prone to poverty (rural poverty incidence was 47 percent compared to 25 percent for urban areas in 1994). The CORDES survey finds that two-thirds of the entrepreneurs have at least a high-school degree, and almost one-third have a college education. Moreover, more than half of the entrepreneurs were born in a major Ecuadorian city and they tend to classify themselves as coming from a middle-class family background. Owners of FOPINAR firms tend to have a higher family income status than other entrepreneurs: one-quarter of FOPINAR firms' owners reported a low-income family background, compared to almost one-third among the owners in the control group. This evidence indicates that SSE credit

did not contribute to a reduction in poverty, and that in fact it probably served to subsidize the better off entrepreneurs.²⁴

3.19 *FOPINAR credits and female entrepreneurs.* The issue of gender was not explicit in the first three World Bank SSE lending programs, but it was highlighted in the proposal for SSE IV. The report on poverty in Ecuador (World Bank, 1996b) finds that participation in the labor force is considerably lower for poor than for non-poor women. The CORDES survey confirms the fact that Ecuadorian industry tends to have very few women entrepreneurs who either own or run companies: more than 80 percent of entrepreneurs are male (in both the FOPINAR and the control groups). Finally, FOPINAR records show that the average loan size is much smaller for women, although this difference becomes negligible for medium-sized firms. This finding does not necessarily imply discrimination on the part of the financial institutions. The loan size differential may be a demand-derived phenomenon. Women could be asking for smaller loans, rather than being granted less credit.²⁵

Firm growth and efficiency

3.20 SSE I and II emphasized the use of the sub-loans to acquire fixed capital, while SSE III and IV permitted their use for working capital as well. In addition, the PFIs, when assessing a proposed project to be financed with FOPINAR funds, had to estimate future job creation under the project. The question to be examined here is whether the emphasis on job creation and fixed capital led to a discernible difference in the behavior of FOPINAR firms as compared to the control group.

Did FOPINAR improve firms' performance?

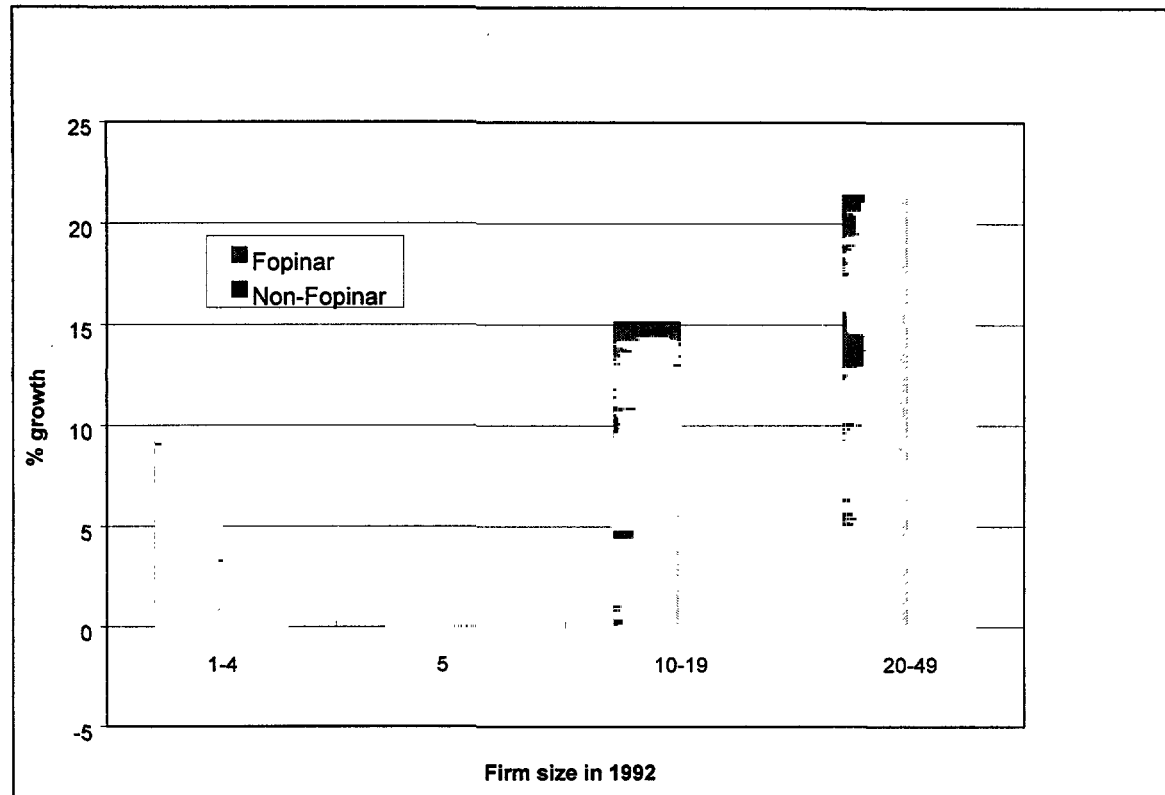
3.21 Yes, at least in the most recent period. Figure 3.6 shows that post-1992 growth of value added was higher for FOPINAR firms than for the control group for firms of less than 20 workers, and very close for the 20-49 worker group. Sketchy data for the pre-1992 period indicate low, but very similar growth rates for both the FOPINAR and non-FOPINAR firms.²⁶

²⁴ The presence of educated owners does not indicate discrimination against non-educated owners of SSEs. Baydas, Meyer and Aguilera-Alfred (1994) observe a similar skewed distribution of rationed credit in Ecuador toward entrepreneurs with high school or higher formal education. They test the hypothesis that there is discrimination in the supply of subsidized credit, but find that the skewed distribution is better explained by reduced demand for credit on the part of less well educated entrepreneurs.

²⁵ Although anecdotal evidence indicates that many of the loans were contracted in the name of a wife, sister or other female relative, that did not necessarily mean that a woman was the owner or the manager of the firm.

²⁶ Note that in Ecuador, firms are legally required to keep records only for the most recent three years. This explains in part the extremely poor response rate for information about the pre-1992 period. Many entrepreneurs were unable or unwilling to provide this information.

Figure 3.6: Annual Average Growth of Value Added, FOPINAR and non-FOPINAR Firms, 1992 to 1995



Source: Roberts, et. al. (1997).

3.22 Multivariate analysis was used to examine the factors contributing to the growth in value added of the firms during the 1992-95 period.²⁷ This analysis on the sample of 218 firms finds that, as expected, percentage increases in labor and in fixed assets consistently explain growth in value added.²⁸ Participation in FOPINAR programs (an indicator of access to long-term credit) increases annual growth of value added by 4 to 9 percent, on average (depending on the specification of the model). The number of credits is positively related to growth in value added: each FOPINAR credit received during the life of the firm is associated with a 4 percent higher annual growth rate in value added. However, it is not clear how much of the growth results from the access to credit and how much from the selection effect of the stronger firms being chosen by banks to receive the sub-loans. The high increase in value added from FOPINAR participation includes both the effect of FOPINAR and the effect of the borrower selection by banks.

3.23 This result—that FOPINAR firms performed better than non-beneficiaries—echoes other econometric analyses of Ecuadorian firms with longer panel data. Using panel data (1984-88) of

²⁷ A production function was estimated using percentage changes in value added, fixed assets and employment. The results show a Cobb-Douglas-like production function with no economies of scale (i.e., the coefficients for fixed assets and labor approximate unity).

²⁸ Only a small portion of the variations in the growth of value added during 1992-5 is explained by the information contained in the independent variables (the R squares are low). However, the size, signs and significance of the coefficients support the hypothesis that increases in labor and fixed assets explain growth in value added.

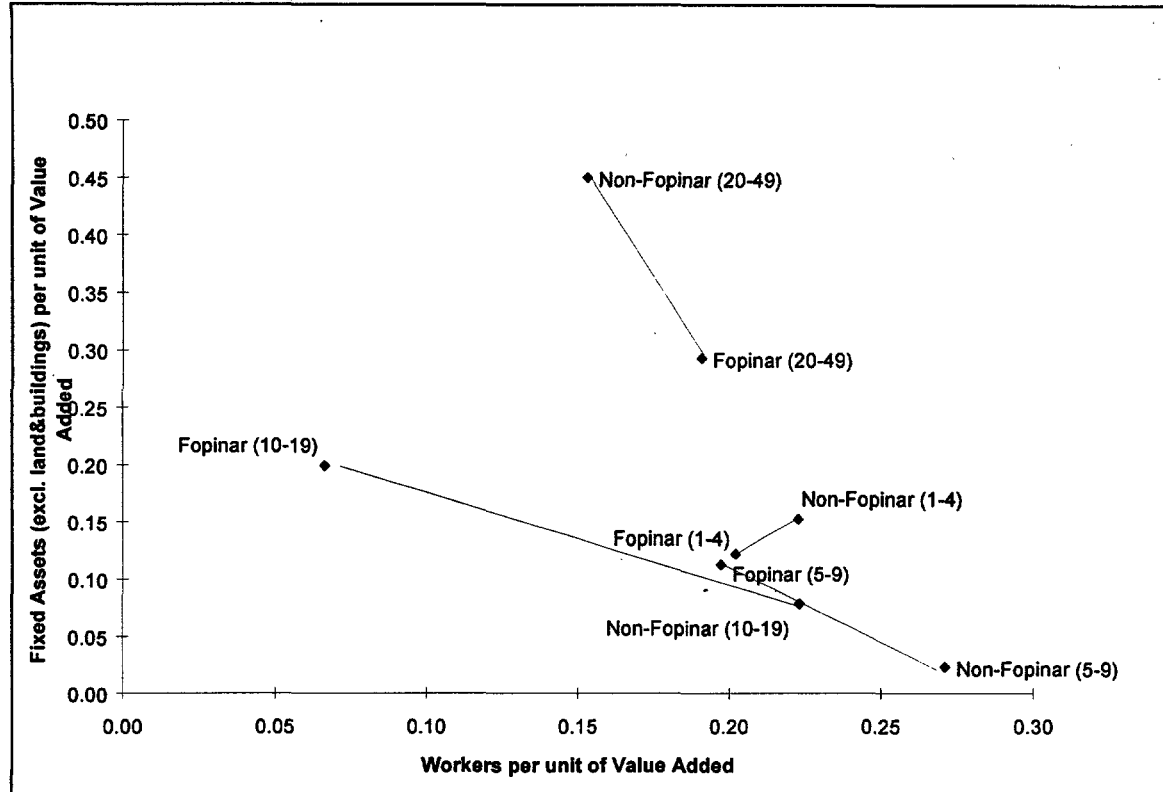
731 Ecuadorian firms, Jaramillo and Schiantarelli (1997) find that firms with long-term credit (defined as being longer than a year) have higher productivity (proxied by sales). When sales are regressed against capital, labor, maturity and leverage, the debt maturity has a positive effect on productivity, while debt size is not significant. However, it is important to remember that throughout the 1980s the interest rate on each long term credit was so low that the rental cost of capital was below zero, by a substantial amount. Hence, it is unclear how much of these “efficiency” gains are due to large interest rate subsidies versus the gains from longer term debt.

Are FOPINAR firms efficient?

3.24 As a general matter the answer is no (note that most of the increase in manufacturing value added in Ecuador during the period of the loans was produced by firms with more than 200 workers—see Figure 3.2). However, within the much weaker standard of comparison—firms of their own size category—FOPINAR firms do not appear to be technically *inefficient* in comparison with the control group: they do not consume, on average, more of *both* inputs (capital and labor). However, data from the survey show that small firms with FOPINAR credit tend to be more capital intensive than non-FOPINAR firms (see para. **Error! Reference source not found.** and Figure 3.7), which reflects the fact that FOPINAR credit may have promoted overcapitalization. *Across* size categories, firms with 5 to 19 workers have the best record in technical efficiency (see Figure 3.7, which shows a “snapshot” of the sample in 1995; the picture for 1992 is similar).²⁹ However, in our sample, over one-third of the sub-loans went to firms with less than 5 employees. The input ratios for these firms are the farthest from the origin in this Figure. Hence they are the relatively least efficient subset of the beneficiaries.

²⁹ Evidence from Southeast Asia and elsewhere indicates that small firms (up to 50 workers) are not more technically efficient than medium ones, nor are they more labor intensive (Little, 1987).

Figure 3.7: Average Capital and Labor, Ecuadorian Firms, 1995



Were FOPINAR funds used to promote geographical dispersion?

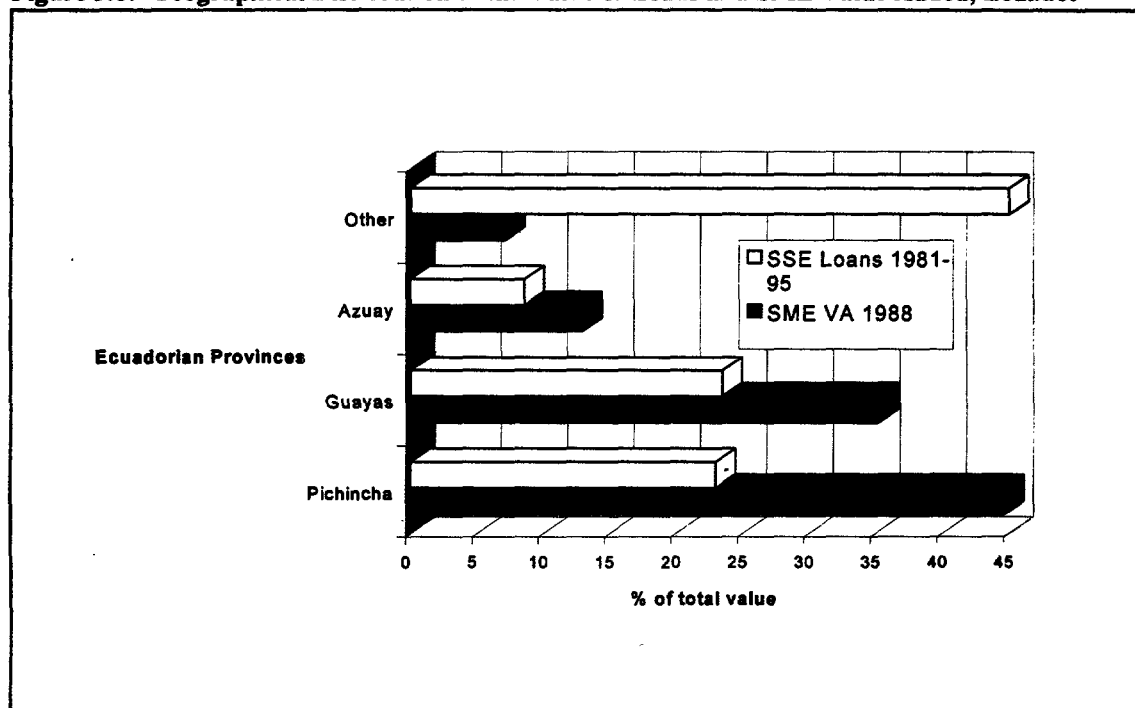
3.25 Yes. More than 90 percent of the value added of small and medium sized enterprises (SMEs) is concentrated in the provinces of Pichincha, Guayas and Azuay. Figure 3.8 shows that FOPINAR funds were directed particularly to other provinces than these three. SSEIV loans in particular accentuated the decentralization of FOPINAR funds—the value of FOPINAR loans to “Other Provinces” rose from 42 percent to 49 percent during the period 1990 to 1995. This pattern differs from that found in Sri Lanka and the Philippines, where loans tended to follow more closely the spatial allocation of industry.³⁰

3.26 A relevant question at this point is whether further geographical dispersion was desirable. It is true that SSEs are located in rural areas and small towns, and these firms, which tend to be traditional household enterprises, are likely to decline in importance in the process of industrialization (either by becoming larger units or simply by disappearing). Supporting these firms could come at a cost in terms of efficiency. While large firms can rely on economies of scale to lower their production costs, SSEs must depend more on *economies of agglomeration*

³⁰ The value added figures are based on INEC survey data, which exclude firms with fewer than 10 workers. They may exaggerate the concentration of manufacturing, and therefore they are not directly comparable to the FOPINAR data.

which can only be obtained by locating near cities, which provide complementary activities, such as access to intermediate inputs or infrastructure facilities.³¹

Figure 3.8: Geographical Distribution of the Value of Loans and SME Value Added, Ecuador



Note: SME in manufacturing and mining are defined as having less than 100 workers.

Sources: Roberts, et. al. (1997) and Lanusse (1993).

Firm access to finance

Was credit access advantageous for FOPINAR beneficiaries?

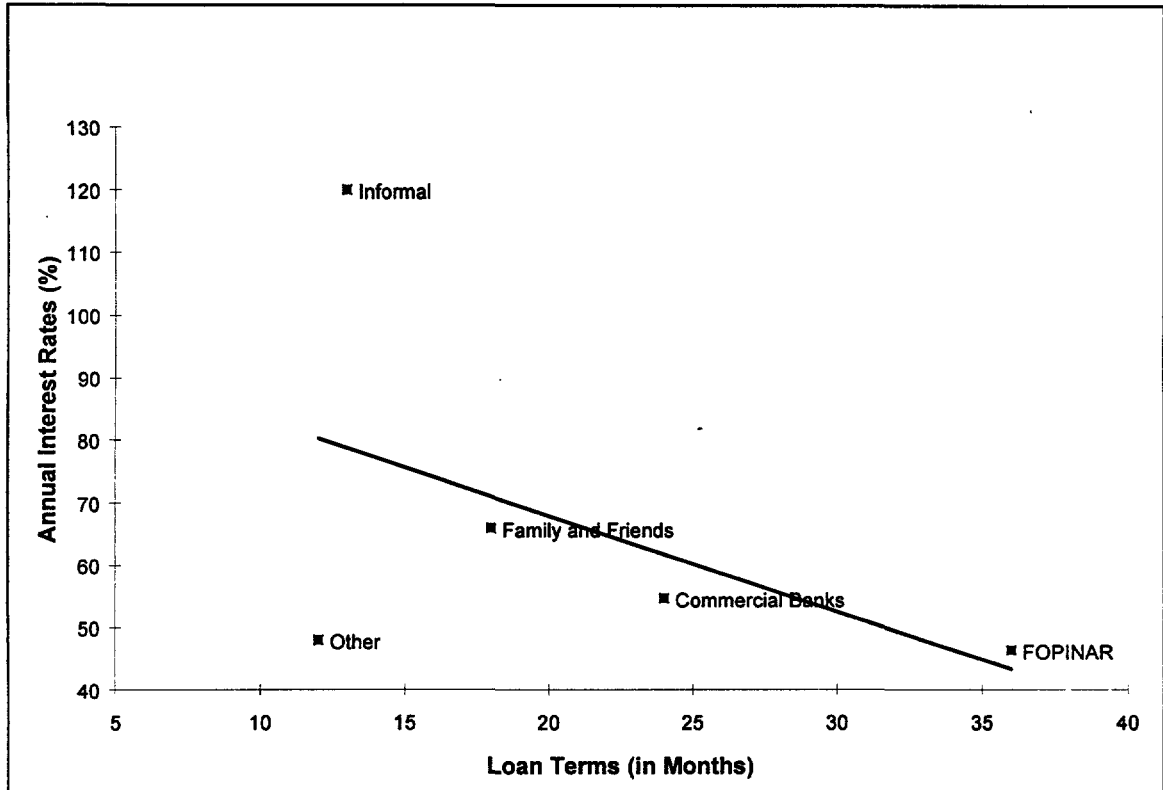
3.27 Yes. The credit histories clearly show that the SSE sector has access to credit outside of FOPINAR programs. However, this credit tends to be short term and directed for the purposes of working capital or for cash flow. FOPINAR loans have not always had much of an advantage over commercial loans in terms of interest rates³² or collateral requirements, but they have had the decided advantage of being medium and long term loans, specifically directed toward acquiring fixed capital. The majority of FOPINAR loans were secured by machinery or real estate. A much smaller number required only a personal guarantee; their average size was much smaller. Commercial bank loans were less likely to require collateral in fixed assets, and much more likely to require a personal guarantee. Commercial loans secured by fixed assets were smaller on average than those secured with a personal guarantee. Figure 3.9 shows the trade-off

³¹ Large urban centers also offer a greater pool of skilled workers for SSEs (Gillis, et. al., 1992).

³² During the 1981-91 period, while FOPINAR loans were not always cheaper than commercial loans, most medium- and long-term loans (whether commercial or from FOPINAR lines of credit) had negative real rates of interest. In the context of sustained inflation, which peaked in 1988 at an annual rate of over 80 percent, the FOPINAR loans, with nominal interest rates of 28-30 percent were extremely favorable.

between loan conditions and interest rates on alternative credit sources³³ It shows that FOPINAR borrowers had lower interest rates and longer terms than those provided by other sources.

Figure 3.9: Debt Maturity and Nominal Interest Rates: A Credit History of Ecuadorian firms, 1993-95



Source: Roberts, et. al., 1997.

Did FOPINAR support new manufacturing units?

3.28 Yes. During the period 1981-95, one quarter of FOPINAR loans were for new projects.³⁴ These tended to be more expensive than projects for the expansion of existing firms, so they accounted for a third of the total value of loans. The trend in FOPINAR lending has been to increase the number of loans for new projects, while reducing the value of the average loans for these projects (from U.S.\$24,960 during 1981-85 to U.S.\$10,269 in the 1990s, see Table 3.3).

³³ In figure 3.9, "Informal" and "Other" are very small groups with 7 loans at fixed rates.

³⁴ New projects are not necessarily new firms without credit. They include loans to start a new firm, or loans to start a new factory in a different location, but owned by an existing firm producing the same type of output. FOPINAR financed more than 18,000 sub-projects between 1981 and 1995.

Table 3.3: Distribution of FOPINAR Credit by Type of Project, 1981 to 1995

<i>Period</i>	<i>1981-85</i>	<i>1986-90</i>		<i>1991-95</i>		
Type of Project	<i>Number and percent of loans</i>					
New Project	876	21.3%	1,212	22.8%	2,281	24.9%
Extension	3,228	78.7%	4,106	77.2%	6,883	75.1%
Type of Firm	<i>Value (millions US\$) and percent of total credit</i>					
New Project	21.87	36.7%	19.67	35.5%	23.42	30.1%
Extension	37.74	63.3%	35.69	64.5%	54.49	69.9%
Type of loan	<i>Average loan (US\$)</i>					
New Project	\$24,960		\$16,228		\$10,269	
Extension	\$11,692		\$8,693		\$7,915	
All loans	\$16,648		\$12,283		\$9,675	

Source: Roberts, et. al. (1997), based on FOPINAR files.

Did FOPINAR support for SSEs provide a breeding ground for growth?

3.29 No, at least not during the 1990s.³⁵ Of the 84 FOPINAR firms that employed less than 10 workers in 1992, only 7 (8 percent) expanded to more than 10 workers by 1995. Within the control group, 16 percent of the firms that started out with less than 10 workers grew to over 10. At an even smaller size, only 13 percent of FOPINAR firms of under 5 workers graduated during this period to a larger size (5-9 workers), whereas 25 percent of the smallest firms in the control group did so. Therefore, the receipt of a FOPINAR loan does not appear to have improved the chances for a microenterprise to graduate to a larger size. The group of FOPINAR firms employing 10-19 workers in 1992 did better by this measure: nearly one-third grew to a larger size, compared to 18 percent in the control group. As a whole, 18 percent of the FOPINAR firms graduated from one size category to a higher one, compared to 22 percent of the control group.

³⁵ Our data do not permit this analysis to be carried out for the 1980s.

4. Impact of Bank Interventions in the Financial System on Credit for SSEs

4.1 Bank lending for lines of credit to SSEs in Ecuador coincided with a period in which the Bank was also trying to persuade the Government to liberalize its financial sector. In some respects, the Bank's encouraging the Government to allocate credit for a particular sector at the same time as it was arguing in principle against directed credit was inconsistent. Directed credit for SSEs was believed to be justified, however, by the presence of market fragmentation: in Ecuador's repressed financial system SSEs were presumed to have had difficulty in accessing credit. Further, as discussed in Chapter 3, in Ecuador's distorted trade regime, these small firms were also presumed to be more productive and labor intensive than larger firms. It was further believed that lack of experience of both firms and banks in identifying and designing projects for financing reinforced the market fragmentation.

4.2 We begin the discussion of this issue by examining trends in long term credit, and then we turn to more specific questions about the impact of FOPINAR on firms and financial institutions:

- Was the Bank's assumption justified that small firms had less access to credit?
- Did Bank support for SSEs in Ecuador promote financial deepening? Could changes in the environment have increased funds available to SSEs?
- Did long-term credit increase in Ecuador? to SSEs? How important was FOPINAR in fulfilling its main objective of increasing long term funds for SSEs in Ecuador?
- Did the PFIs use FOPINAR funds to support relatively more promising entrepreneurs?
- Did Bank support for SSEs improve PFI profitability?
- Was it expensive for the Government to provide credit to SSEs through these projects?

Did small firms have more limited access to credit?

4.3 Yes. Evidence from firm-level data (Jaramillo and Schiantarelli, 1997; Baydas and Aguilera-Alfred, 1994) shows that in Ecuador, as in many other countries, one of the major determinants of the probability of obtaining long-term credit is firm size.³⁴ Further, as noted in Chapter 2, a survey of 555 firms found that only 59 percent of them had received short term credit in 1979, and that those who received long term credit (12 percent of total credit), were the relatively larger ones. Hence, the basic rationale for creating the first SSE program appears to have been valid. The question is whether this situation changed over time.

³⁴ The empirical evidence is from a sample of 731 Ecuadorian manufacturing firms between 1984 and 1988.

Did the Bank support for SSEs increase the potential for financial deepening and long-term credit for SSEs?

4.4 No. While the environment in which the Ecuadorian financial sector operates today is very different from the environment in which it operated in the 1980s, the improvements do not appear to have been prompted by Bank support for SSEs. Indeed, it could be argued that Bank support for SSEs slowed the process of more basic reform needed by the financial sector. In 1980, at the beginning of SSE lending, the financial sector was highly dependent on the Central Bank (BCE) and foreign banks for funds, and it functioned in a world of fixed interest rates. It was also highly repressed, with an M2/GDP of 17 percent (Roberts, et. al., 1997). Despite these characteristics, total bank credit to industry more than doubled as a percentage of GDP over the 1973-83 period.

4.5 This seeming anomaly in results—increasing credit to industry provided by a deeply repressed financial sector—is explained by the government strategy of borrowing abroad and providing funding through directed credit lines operated by BCE. The first two SSE loans were such operations. They supported a financial policy regime which gave almost no emphasis to domestic resource mobilization. The PFIs were required to mobilize only 10 percent of project costs, and Bank funds were used to finance these lines as well as a range of other domestic credit lines. The third project attempted to move to market rate lending, but was ultimately disbursed in an even more deeply negative interest rate environment. Finally, the fourth project, after long negotiations, incorporated a move to market interest rates over two years, by 1992, twelve years after SSE lending began.

4.6 Market rate lending was achieved one year earlier than that called for by SSE IV, i.e., by 1991, and today, with market determined interest rates and little credit from BCE, the financial sector competes on price terms to attract deposits. However, the financial depth is still low—under 24 percent in 1995-96—and until 1994, showed little growth from its repressed pre-reform levels. In contrast, a group of 12 Latin American countries had an average M2/GDP of over 30 percent during 1990-95.³⁵

4.7 Furthermore, along with market-determined interest rates, the last SSE loan also targeted assistance on smaller SSEs than had the previous loans and disbursed these loans at very high real interest rates, in excess of 30 percent, largely through a public sector bank. This kind of targeting and disbursement is likely to result in moral hazard borrowing—many loans being issued to those who will be unable to repay. Indeed, the arrears rate on the last SSE loans supplied by the public bank is high, over 15 percent (in 1993), almost four times the level at private banks, and higher than the rate on its other lending, contrary to experience at other banks.

Could changes in the environment have increased funds available to SSEs?

4.8 Yes. Even if the SSE projects were not instrumental in improving the functioning of the financial sector, the financial sector reforms begun in the mid 1980s, and supported by the World Bank (see Chapter 2), reduced the dependence of financial institutions on the Central Bank. However, given the context of financial crisis in which these reforms were implemented, deregulation and liberalization did not go much beyond interest rate policy, and the financial sector entering the 1990s was still in need of reform. The system was devoid of a well-

³⁵ Based on data from IMF, *International Financial Statistics*.

functioning capital market, due in part to an outdated legal framework, along with the policy of fixed interest rates, the availability of inexpensive funding through BCE, and macroeconomic instability. It was also highly segmented, largely as a result of restrictive legislation and regulatory differences across types of financial intermediaries. Finally, the regulatory burden faced by financial institutions, especially banks, was excessive. The following paragraphs describe changes in the financial sector during the 1980s and, more importantly, in the 1990s which could have created an environment in which SSEs had greater access to credit.

4.9 *Liberalizing interest rates.* In theory, the evolution of Ecuador's financial sector should have paved the way for greater voluntary lending by financial institutions to SSEs. One of the greatest historical impediments to SSE lending in Ecuador was interest rate controls. The low or negative real interest rates that resulted from financial repression had inhibited financial deepening, and financial institutions depended on the Central Bank for funds. The limited availability of BCE credit, especially after the mid-1980s, forced financial intermediaries to ration credit. Not only did intermediaries have an incentive to channel available credit to members of their own economic group, fixed interest rates or regulated spreads also favored lending to larger enterprises, since higher transactions costs make lending to SSEs commercially viable only at relatively high rates. Interest rate liberalization began in the mid-1980s, but strong reversals were experienced, and full liberalization was not achieved until 1992.

4.10 *Developing capital markets.* The lack of capital markets development was also a handicap to SSE lending. A deeper, more active capital market would have encouraged larger firms to borrow directly from the public by issuing debt instruments. Banks and other intermediaries would then need to look for new lending markets. Competitive pressures would force intermediaries to find their niche, lending to consumers, SSEs or larger enterprises. While the Capital Markets Law of 1993 laid the groundwork for future capital markets development (see below), competitive pressures from capital markets will depend largely on future macroeconomic stability and the reduction of policy uncertainty.

4.11 *Limits on lending to related parties.* Although Ecuador has always had what may be considered an excessive number of intermediaries, many of them served the interests of interlocking economic groups. Economic groups had a great incentive to own and control financial intermediaries, thereby ensuring easy access to the preferential credit of the Central Bank. The financial intermediary would direct a good share of its credit to members of the group at favorable rates. According to some estimates (Camacho, 1992), as much as 70 percent of the loan portfolio of some Ecuadorian intermediaries represents loans to related parties. The result is a misallocation of resources to activities that are not necessarily the most profitable, and an overexposure of financial institutions' loan portfolios to the risks of one borrower—the economic group. Thus, the economic group benefited at the expense of the health of the financial institution. Once the economic group began to experience financial problems, so would the financial institution.

4.12 SSEs were generally outside of the economic groups that surrounded financial institutions. While the reforms of the 1980s attempted to limit lending to related parties, the regulation was nearly impossible to enforce. In addition, the Superintendency of Banks did not allow entry of any new banks into the Ecuadorian market for many years, until the passage of the Financial Institutions Law in 1994, allowing free entry by institutions meeting minimum requirements. Moreover, the law set clearer and stricter limits for lending to related parties. Theoretically, these changes should help to make the market more competitive and direct a

greater share of lending to parties not related to the financial institutions, but no evidence of this is yet available.

4.13 *Improving the regulatory framework.* As a result of reforms during the 1980s, supported by the World Bank under the FSAL, the health of Ecuador's financial system improved. For instance, arrears rates fell during the mid-1980s to the early 1990s, while the level of provisioning for bad loans rose.³⁶ However, additional reforms were needed. Two important attempts to improve the regulatory framework in financial markets should help to increase credit to the entire Ecuadorian system, and hence, to SSEs: the Capital Markets Law and the Financial Institutions Law. However, these laws, initiated in the 1990s, have yet to prove their potential for increasing financial deepening and resource mobilization.³⁷

4.14 By the end of 1995, however, both new and existing institutions were confronting a difficult situation and began to request liquidity loans from the Central Bank. Their problems were reflected in a rising arrears rate and falling provisioning. In November 1995, the Superintendency of Banks imposed a three-year moratorium on new entrants into the fragile financial system. Several mergers and acquisitions took place in late 1995 and early 1996, and the Central Bank intervened in a large bank, bailing out depositors in an effort to avoid the systemic risk implications of a liquidation in a fragile financial system. The failure pointed to a grave weakness of the Financial Institutions Law: it does not grant the authorities the power to take over a troubled institution without the owners' consent, except in the case of a liquidation, thereby limiting the authorities' ability to act quickly and take corrective action. Thus, the financial sector, its legal framework and the supervisory authority still have weaknesses.

4.15 *Institutional development and informational problems.* A final factor that should have contributed to greater SSE lending over time is CFN's second-tier lending program to SSEs. In some ways, institutional impediments to long-term lending to SSEs were seen as a market failure that could be corrected if financial institutions could gain experience and a level of expertise in SSE lending. With the help of external funding from the World Bank and other sources, CFN through its FOPINAR program has channeled funds through public and private intermediaries to SSEs. The SAR for SSE I argued that when financial institutions lack experience with SSE lending, transactions costs for such loans are high. It follows that the interest rate required to make SSE lending as profitable as lending to large enterprises would have to be very high. However, such high interest charges could increase the risk of default on the SSE loans, so much

³⁶ Arrears rates (amounts past due/total loans) fell from 12 percent in 1985 to 4 percent in 1994, while provisioning (provisions/amounts past due) rose from 20 percent to over 70 percent (Roberts, et. al., 1997).

³⁷ The main objective of the Capital Markets Law (1993) was to promote an organized and integrated market that is efficient and transparent. Capital markets activity boomed in 1993 and 1994 relative to prior years. While such activity might not have been possible without the legal infrastructure provided by the Capital Markets Law, greater macroeconomic stability was also a factor. The main objective of the Financial Institutions Law (1994) was to rationalize the structure and regulatory environment of the financial sector. Going into the 1990s, the financial sector was made up of numerous financial intermediaries of various kinds. This segmentation of the market was largely due to restrictive legislation allowing institutions to engage only in an express list of activities and to the lack of a common regulatory framework for all institutions. Both factors gave rise to financial groups made up of a bank plus other financial intermediaries that could do things that the bank could not do directly or that had a lower regulatory burden. The law limited to four the kinds of private financial intermediaries that can operate in Ecuador and provided incentives for members of financial groups to merge by leveling the regulatory playing field and by granting banks greater operational flexibility. After passage of the Financial Institutions Law, many new financial institutions entered the market.

so as to outweigh the direct effect of the high interest rates on the lender's rate of return. As a result, loans to SSE applicants may not be disbursed at all. Financial institutions can play an important role in relaxing some of the constraints caused by asymmetric information by learning to identify good borrowers, monitor actions and outcomes and enforce contracts (see, for example, Calomiris and Himmelberg, 1993). One objective of the FOPINAR program was to help PFIs gain the skills necessary to make SSE lending viable. The program included technical assistance to train bank officials how to select and monitor SSE beneficiaries.

Did long-term credit for SSEs increase in Ecuador?

4.16 No. Long term debt has always played a minor role in Ecuador, as in most countries with a long history of credit repression. In the early 1980s, 12 percent of the total debt was long term (maturity greater than a year). Estimates for 1996 show that, in the first half of the year, long term credit was around 8 percent of total credit. This implies that the objective of using World Bank funds to bring about a sustainable increase in long-term funds—the main objective of SSE loans—has not been fulfilled. Furthermore, as shown in the following table, the share of credit to small-scale industry declined as a share of total credit to industry throughout most of the 1980s. (The absolute amount also declined in real terms, as the amount lent to medium and large industry rose by two-thirds.) The declining share of credit is in contrast to small-scale industry's 1980 share of total industrial value added (29 percent) and industrial gross fixed capital formation (16 percent).

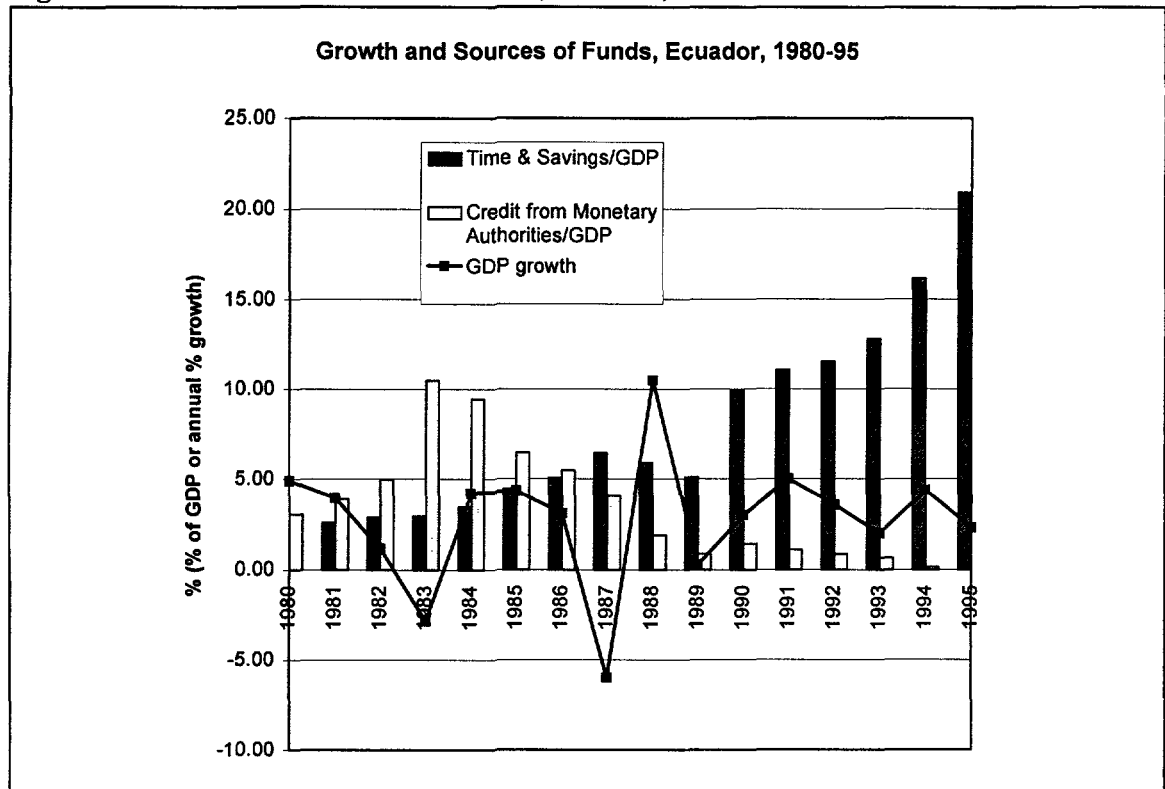
Table 4.1: Banking System Credit to Small versus Medium and Large-Scale Industry, 1981-87

Year	Credit to Medium and Large Industry		Credit to Small Industry	
	(Millions of 1980 sucres)	(%)	(Millions of 1980 sucres)	(%)
1981	24,122	92.3	2,003	7.7
1982	27,763	92.6	2,206	7.4
1983	30,877	95.2	1,565	4.8
1984	30,048	93.8	1,991	6.2
1985	36,140	95.3	1,766	4.7
1986	37,427	96.1	1,503	3.9
1987	40,185	95.5	1,903	4.5

Source: White (1989).

4.17 Financial liberalization in the 1990s has brought some financial deepening (see para. 4.6), following two decades of dialogue between the World Bank and the Government on financial sector issues. As liberalization made erratic progress in the 1980s and 1990s, the financial sector reduced its dependence on the Central Bank,³⁸ while time and savings deposits grew, especially after interest rates were completely liberalized in 1992 (Figure 4.1).

Figure 4.1: Growth and Sources of Funds, Ecuador, 1980-95



Source: International Financial Statistics.

³⁸ This reduced dependence was one component of the structural adjustment program. Toward this end, the Government restricted the amount of preferential credit granted through private financial institutions to the private sector and reduced the number of credit lines at the Central Bank. In addition, the interest rates charged on Central Bank credits were brought more in line with market rates. The amount of credit from the Central Bank fell continuously until the Monetary Regime Law of 1992 finally eliminated its financial intermediation function.

Box 4.1: Does Financial Intermediation Matter?

Economists have long debated the importance of the relationship between financial systems and economic growth. Financial institutions such as the Central Bank and commercial banks use a number of financial instruments to facilitate trade in goods and services and to funnel resources from savers to investors. Documenting this relationship is difficult because of the problem in constructing unambiguous measures of the state of the financial system and government policies toward financial activities. Previous studies have shown that financial deepening is positively related to growth and that financial repression (particularly with deeply negative interest rates) is negatively related to growth.

For example, King and Levine (1993) develop a set of stylized facts about the relationship between financial structure and economic growth. One of the major findings of their study is that the larger the fraction of credit allocated to private enterprises, the larger the effect on growth after controlling for initial conditions and measures of monetary, fiscal and trade performance in a sample of 119 countries. They find similar results for countries in which the Central Bank allocates a lower share of total credit. Their work also shows that countries with financial depth are better able to weather adjustment programs. Those economies with “deeper” financial sectors were able to restore growth much more rapidly than could those economies with shallow systems.

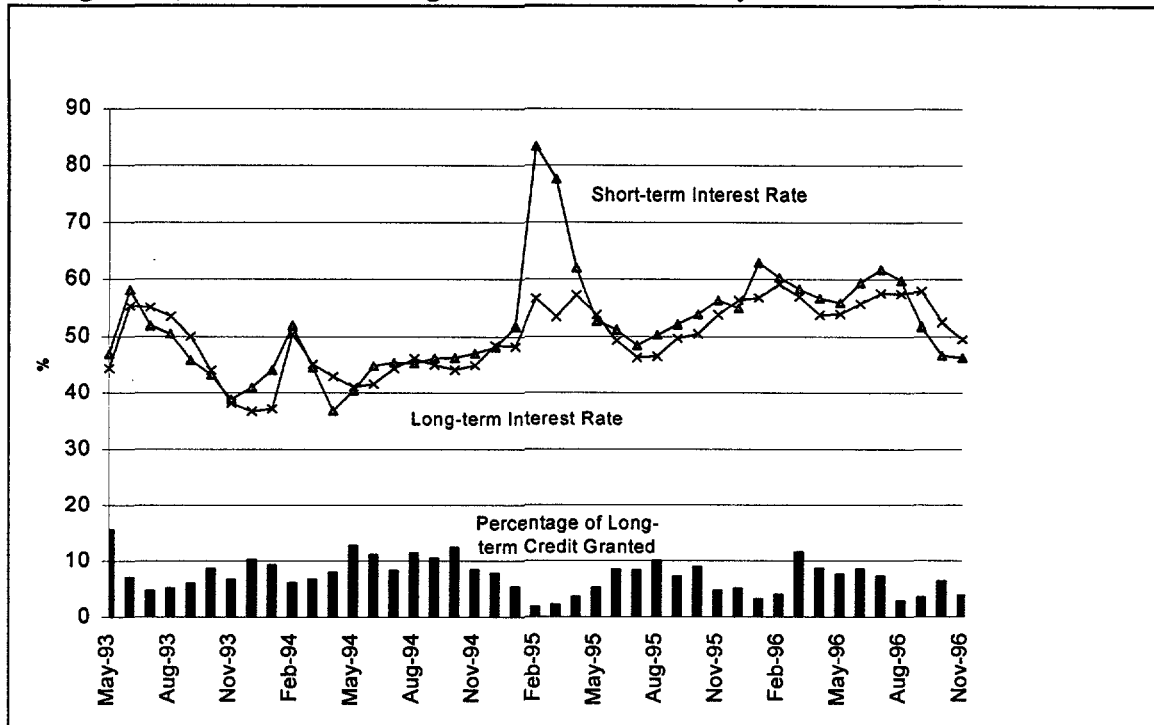
In Ecuador, the lack of sustained financial sector adjustment throughout the 1980s unquestionably contributed to less financial depth. In the King and Levine framework it may also therefore explain lower growth and more difficulties in adjusting to the relative price shocks that the country has experienced over the past 15 years.

4.18 The financial deepening which has occurred has not increased long-term credit to firms. Figure 4.2 shows how volatile the percentage of long-term funds lent by private banks has been between 1993 and 1996, years which coincide with the period of interest rate liberalization. Long-term funds declined from 16 percent of the total in May 1993 to less than 6 percent by the end of 1996. During 1996 (an election year), long-term credit fluctuated between 2 percent and 12 percent of new loans granted by private banks.

4.19 Figure 4.2 shows how external shocks and domestic political changes have affected the market for long-term credit. For example, the conflict with Peru in early 1995 reduced the percentage of new long-term loans granted, while increasing the price of short-term credit (short-term interest rates skyrocketed to more than 80 percent in nominal terms).³⁹ Only after September of 1996—when President Bucaram took office—did interest rates on short-term credit move below the long-term rates.

³⁹ Inflation averaged around 20 percent in 1995.

Figure 4.2: Long-term Credit (as percentage of total credit) and Interest Rates (nominal average rates) on Short- and Long-term Credit Granted by Private Banks, 1993 to 1996



Source: Roberts, et. al., 1997.

How much of the available long-term credit went to SSEs?

4.20 FOPINAR is a synonym for long-term credit for SSEs, and FOPINAR funds represent only a very small fraction of total credit in the banking system: 1 percent in 1992 and only 0.15 percent in 1996. FOPINAR represents a higher—if still small and declining—share of all long-term loans: approximately 6 percent at the beginning of 1993 and 2 percent in 1996. Moreover, the maturities of FOPINAR loans have also been falling steadily: from maturities greater than 6 years at the beginning of the program to an average maturity below 4 years at present (Roberts, et. al., 1997, based on FOPINAR database).

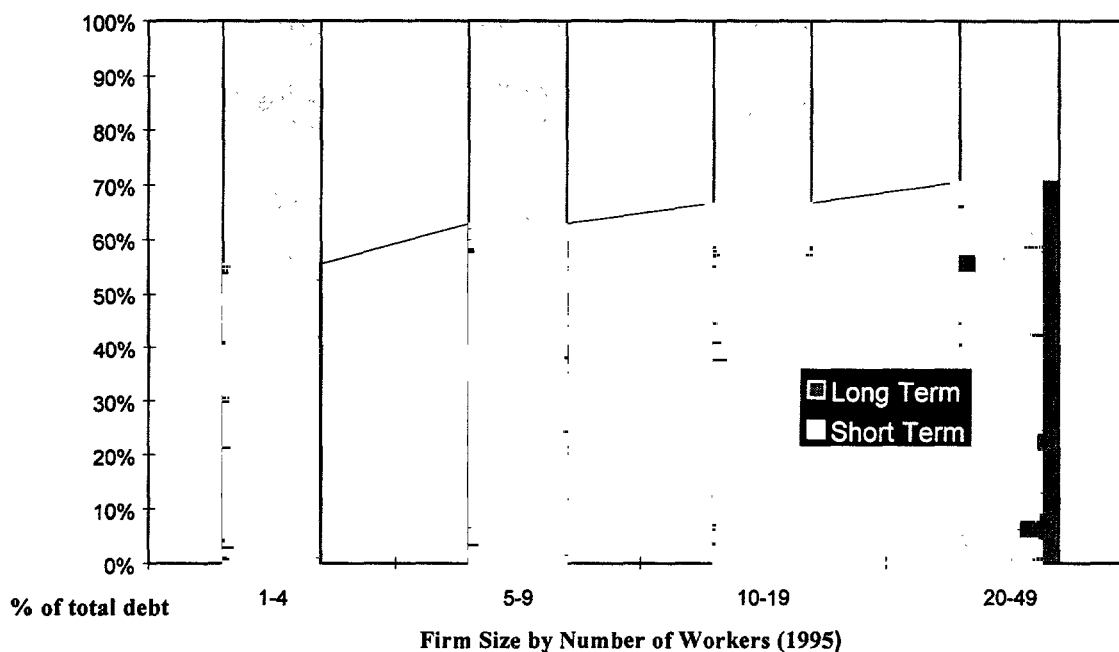
4.21 However, our survey data reveal that most SSEs have access at least to short term credit.⁴⁰ The large majority of firms have successfully applied for credit in the formal market (outside of FOPINAR). Only 24 of the 218 firms had not applied for credit, and only seven had applied and not received credit; 86 percent of the entire sample had received credit. It appears, therefore, that access to (short term) credit is not difficult for the bulk of the firms.⁴¹

⁴⁰ Table 1 in Annex 2 shows the average number of commercial credits by firm size for FOPINAR firms and for the control group.

⁴¹ This conclusion is substantiated to some degree by a 1993 survey of 68 firms in the three most important cities of Ecuador which found that the most serious constraints to private sector development were political instability and inflation. Lack of credit came in eighth place in the severity of constraint (World Bank, 1994). Only 14 percent of the sample were small firms, however.

4.22 The majority of the firms surveyed for this study do not keep up to date accounts, and the debt statistics for the sample are derived mainly from estimates on the part of the entrepreneur. Nevertheless, the debt/equity ratios seem reasonable (between 0.1 and 1 for firms with fewer than 50 workers). Short-term debt dominates the debt structure of the firms, especially among non-beneficiaries. Small FOPINAR firms have a much higher proportion of their debt in long term debt (29 to 44 percent, depending on the size of the firm, see Figure 4.3) than do the small firms in the control group (12 to 17 percent for firms with fewer than 20 employees).⁴²

Figure 4.3. FOPINAR Firms: Debt Structure, Ecuador, 1995



Source: Roberts, et. al. (1997).

Was the targeted credit to SSEs effective?

4.23 No. Recent empirical work on Ecuador by Jaramillo et. al. (1993) shows that financial liberalization has caused resources to flow away from small firms to larger firms. At the same time, it also shows that these larger firms are more productive and so should be able to outbid the smaller firms. Hence, restricting the credits to small firms was based on a false assumption about their higher productivity. As we show below, it was also based on an incorrect assumption that credit was the binding constraint on these firms. Finally, even if the firms had been credit constrained and more productive, the mechanism used to transfer resources to them was deeply flawed. Box 4.2 considers this last question. It lists the conditions Stiglitz and Uy (1996) suggest as necessary for a directed credit program, such as the SSE lending in Ecuador, to be effective. It compares each of the projects against these standards.

⁴²There are not enough medium sized firms reporting in the sample to make this comparison for the larger firms.

Box 4.2. Effectiveness of Directed Credit

Six characteristics of effective directed credit programs can be inferred from the experience of what is known as the East Asian Miracle, and as suggested by Stiglitz and Uy (1996). It is instructive to use these characteristics to compare the four Bank-supported SSE credits in Ecuador. In addition, because the first three programs were subsidized, it is also appropriate to ask whether the targeting was efficient.

	SSE I and II	SSE III	SSE IV
1. Moderate or no subsidy	No	No	Yes
2. Institutions monitor performance effectively	Yes	Yes	Yes
3. Ability to change rapidly	No	No	Yes
4. Directed towards private firms	Yes	Yes	Yes
5. Limited amounts	No	No	Yes
6. Credible DFI	Yes	No	No
7. Targeting	No	No	No

4.24 The first two projects are considered together because they both took the macroeconomic framework as given; the third project attempted to address policy concerns, but failed; while the last project operated mostly in a liberalized financial sector. However, the latter was also a project that focused more exclusively on very small firms and one which onlent at very high real interest rates.

4.25 The first column indicates that SSE I and II failed to fulfill 4 of the 7 characteristics of an effective directed credit program. Moreover, their fulfillment of the second attribute, that of *monitoring performance* well, is, in this case, not a strength, since the negative lending rate provides borrowers with such strong incentives to repay that monitoring is less important. The *subsidy*, with interest rates averaging negative 3 or 4 percent, on SSE I was not as high as those that occurred under SSE II or III, under which negative rates became much deeper.

4.26 The second column indicates that SSE III fared even worse than I and II, satisfying only 2 of the 7 qualities. It also provided greater subsidies than SSE I and II. Finally, SSE IV improved relative to SSE III, but the very high real interest rates and delinquency rates at a public bank make the current situation untenable.

4.27 Subloans under SSE I and II had fixed interest rates and so could not *adjust to the changing economic environment* quickly. Nor did subloans under SSE III, as interest rates were not changed nor was disbursement affected by the lack of adjustment of interest rates, despite the deteriorating inflation situation. Finally, in principle, the ability of lenders and very small scale borrowers to adjust to changing economic circumstances under SSE IV has improved. However,

these borrowers are also confronting extremely high real interest rates, which necessarily limits their ability to adjust quickly.

4.28 All the projects were *directed at private sector firms*. However, contrary to the following criterion, the amounts so directed had *very high limits* in the first three loans (\$300 - 350,000 maximum sub-loan size) relative to firm size. Average sub-loan size under SSE I and II was close to \$50,000, a relatively large amount for small firms. This amount declined under SSE III and IV, but so too did the size of eligible firms.

4.29 FOPINAR was established under SSE I and subloans disbursed more rapidly than had been anticipated; the *DFI was credible* under the first two loans. This credibility was noted by studies that referred to FOPINAR as one of the best small and medium enterprise DFIs in the world. However, by the time SSE III was in operation it became clear that an effective DFI required more than just an effective basic lending instrument and management structure. Deeply negative interest rate under SSE III and a declining profitability under SSE IV have reduced the credibility of FOPINAR.

4.30 The *targeted assistance*, as discussed in Chapter 3, did not reach a group of entrepreneurs who faced fewer distortions and were more productive than other firms. Moreover, even if they had been the appropriate group of borrowers to target, the scale of the subsidy—in many cases well over 100 percent of the cost of capital—meant that the targeting of assistance was weak.

4.31 Finally, with regard to targeting, as shown in Table 4.2, relatively few—one-fifth—of the firms receiving credit were facing a credit constraint for their activities. According to our estimates, these firms did not need credit, much less highly subsidized credit, to increase their output levels. This finding is consistent with evidence that in many developing countries, credit is often not the constraint on firm performance; additional credit has little or no effect on output. For example, Demircuc-Kunt and Maksimovic (1996b) show that in the 1980s, two-thirds of the firms in Brazil and South Africa could have sustained their growth levels without access to external finance.⁴³

⁴³ We use the model in Demircuc-Kunt and Maksimovic (1996b) to estimate the proportion of beneficiaries and nonbeneficiaries that could maintain their current growth rates without borrowing funds. Their model is a simple financial planning perspective that provides an estimate of the rate of firm growth that could be sustained by relying strictly on internally generated funds. Firms that grew at faster rates required external finance to achieve their growth levels.

Table 4.2: Firms Requiring External Finance to Maintain Current Growth Rate, Ecuador, 1995

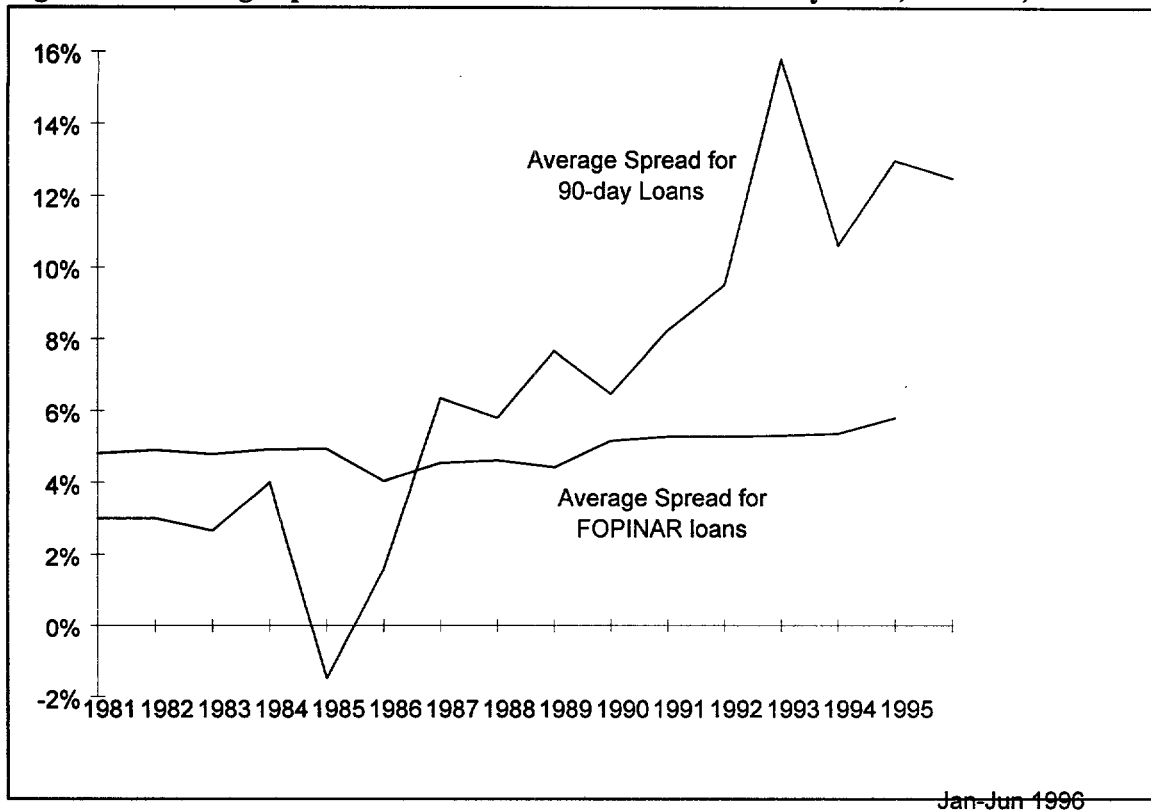
<i>Type of Firm</i>	<i>Firm Size</i>	<i>Percentage of Firms Requiring External Credit*</i>
FOPINAR	1-9	28.6%
FOPINAR	10-20	10.3%
FOPINAR	20+	15.4%
Total FOPINAR		20.7%
Non-FOPINAR	1-9	16.7%
Non-FOPINAR	10-20	11.1%
Non-FOPINAR	20+	0.0%
Total Non-FOPINAR		13.2%

*Computation based on Demirguc-Kunt and Maksimovic (1996a), with data from Roberts, et. al, (1997).

Did Bank support for SSEs improve PFI profitability?

4.32 Yes, but the attractiveness has diminished. The attractiveness to the PFIs of FOPINAR lending depends in large part on the risk-adjusted profitability of such loans relative to other types of loans and financial services. Loan profitability depends largely on the interest spread earned (Figure 4.), and risk depends largely on the credit quality of the borrower (Figure 4.4). If FOPINAR loans pay more on a risk adjusted basis than other loans, PFIs would have an incentive to move more heavily into FOPINAR lending, *ceteris paribus*. Over time, spreads on FOPINAR loans have been constant, but they have been declining relative to other loans (such as 90-day loans) in Ecuador's current high real rate environment. Moreover, adjusted by the risk of default, the incentive to PFIs for offering FOPINAR loans has been eroded by higher default rates of SSEs in recent years. As a result, over time, the financial institutions had less incentive to increase their portfolios with FOPINAR loans. Disbursements under SSE IV lagged behind the expected schedule, because of the banks' high liquidity and their preference for lending their own short-term funds.

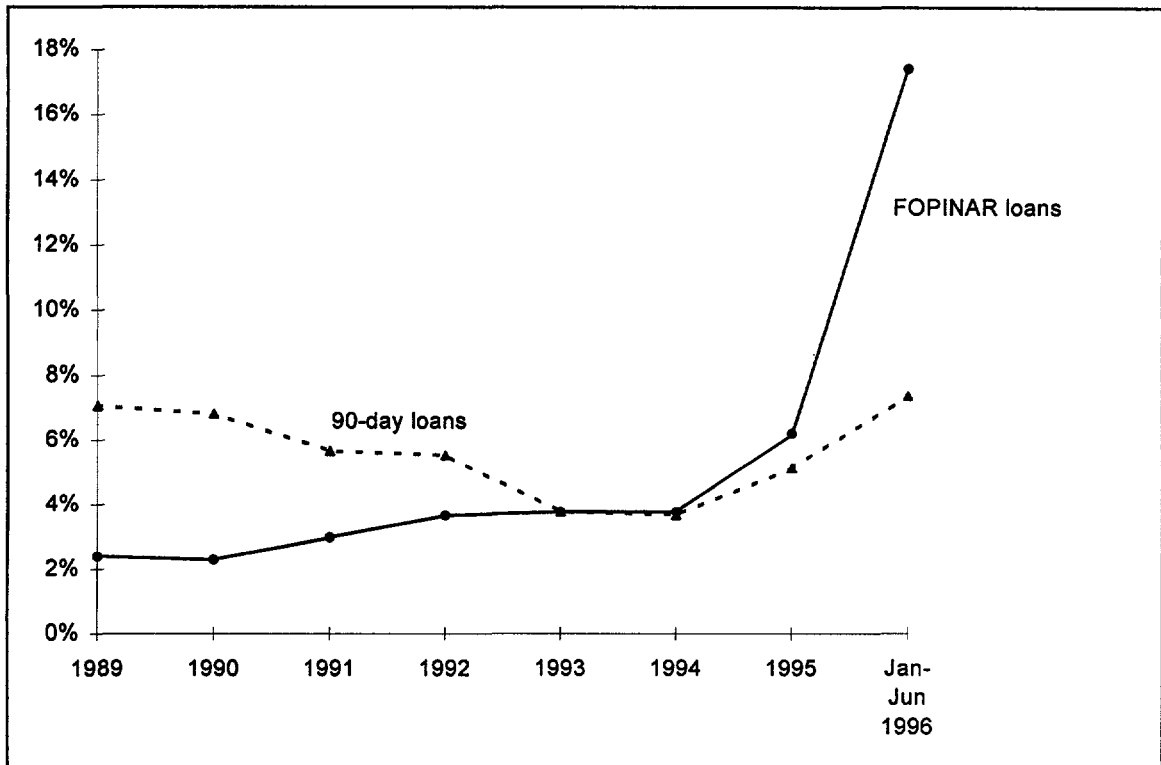
4.33 The initial incentive offered for lending to SSEs proved to be effective, but at both the wholesale and retail levels, the incentives were very large. For example, at the retail level, as is to be expected when PFIs can earn a spread of up to 6 percent for loans with very low default rates, they will be interested in such lending. However, when the interest rates charged are negative, PFI profitability does not stem from providing effective financial services. It is a direct result of the intermediary's ability to confer very large subsidies on a necessarily limited number of borrowers. Similarly, at the wholesale level, FOPINAR earned a spread of 3 percent per year for providing a very narrow loan wholesaling service, a level three times that of a very similar service performed by NDB in Sri Lanka, a firm that was recently privatized.

Figure 4.4: Average Spreads for FOPINAR loans and for 90-day loans, Ecuador, 1981-96

Source: Roberts, et. al., 1997.

4.34 *Rising arrears rates among SSEs.* One might expect FOPINAR loans to have a higher spread than 90-day loans because of their longer term (on average over the period, FOPINAR loans carried a maturity of 5 years) and higher administrative costs. However, if loans to SSEs were seen as less risky than other loans, banks might be willing to accept smaller spreads, as they did over the 1987-1995 period. Available data going back to 1989 show that the arrears rate (proxy for credit risk) on FOPINAR loans was significantly below that on the overall loan portfolio of private banks until 1992, by 3.4 percentage points on average. The arrears rate on FOPINAR loans was rising, however, while that on total loans fell. By 1994, the arrears rate on FOPINAR loans exceeded that on the total loan portfolio in Ecuador; in 1996 the arrears rate for FOPINAR was 10 percentage points above that for the country as a whole (Figure 4.5). Therefore, while the difference in credit quality might have justified accepting a lower spread on FOPINAR loans prior to 1993, it would hardly do so in recent years.

Figure 4.5: Arrears Rates on FOPINAR Loans and on All Loans in the System, Ecuador, 1989-96



Source: Roberts, et. al., 1997.

Was it expensive to support SSEs?

4.35 Yes, very expensive. Paragraph 3.16 showed that the subsidy to beneficiaries canceled out or exceeded their incremental value added. This is a very inefficiently targeted subsidy, which gave far more to each enterprise than was necessary to induce or assist it to undertake a particular type of behavior.

5. Impact, Sustainability and Lessons of Experience

5.1 The ultimate objective of the four SSE loans to Ecuador was to encourage the growth of a sector—small enterprises—that employs over 30 percent of the labor force and was expected to give rise to employment-intensive economic growth. The underlying assumptions were that the small firms were labor intensive and would create jobs at low cost. These jobs, combined with an emphasis on geographical dispersion, would lead to improved income distribution and poverty alleviation, as well as economic growth. Finally, it was assumed that SSEs could not grow without this assistance because of credit constraints. The vehicle chosen for assistance was a series of lines of credit aimed at easing the scarcity of term finance for micro and small firms by providing funds, while at the same time expanding the capacity of the financial sector to lend its own resources to this sector. The loans spanned a period of more than a decade and a half, from 1980 through the mid-1990s. They were undertaken in an environment that was strongly influenced by many factors, including exogenous shocks and political volatility.

5.2 The SSE sector was influenced by the Bank's program in Ecuador well beyond the four SSE loans. The lending program included a number of other loans in the financial sector, including a Financial Sector Adjustment Loan, as well as loans to other sectors with implications for the policy environment facing SSEs. The Bank also carried out an active economic and sector work program and pursued a policy dialogue with the Government that incorporated all of these components.

Impact and sustainability

5.3 The SSE loans were implemented for the most part in a highly distorted macroeconomic environment. Interest rates throughout the 1980s and into the early 1990s were negative, sometimes highly so; the manufacturing sector was heavily protected, particularly the subsectors in which SSE lending was concentrated; and attempts to undertake market-based reforms were periodically reversed as political regimes alternated.⁴⁵

5.4 In this environment, it is not surprising that the main finding of this study is that while the SSE projects did contribute to a slight expansion of employment in the beneficiary enterprises, this expansion was neither efficient nor sustainable to the extent expected. Nor is it clear that the employment expansion was generated by the highly subsidized credits: in our sample, non-beneficiary employment increased by a greater amount. The highly distorted economic environment in Ecuador during most of the implementation period, particularly the highly negative real interest rates, along with regulated wages and a heavily protected industrial sector, made it impossible for the loans to have the desired impact. In this situation, the provision of long term credit was simply the wrong instrument; the appropriate strategy would have been to begin with reform of the financial sector, providing credit only when the environment was conducive to its use in an efficient manner.

⁴⁵ SSE IV took place in a less distorted environment than did the first three loans. However, our sample includes firms that borrowed only under the earliest years of SSE IV, and our conclusions may not apply to the later subborrowers under that loan.

Firms

5.5 Based on data for the 1990s from firms that borrowed under one or more of the SSE projects, value-added in FOPINAR firms did grow faster than in the control group. However, it appears that the net gain in value added per beneficiary was roughly the same as or even smaller than the subsidy received. As a result, it appears that the net, post-subsidy, gain in value added was very low negative. Within their size groups, FOPINAR firms are no less efficient than those in the control group. They are, however, more capital intensive. Moreover, across size categories, larger firms have higher technical efficiency, whereas the SSE loans concentrated on smaller firms (more than one-third of the sub-loans went to firms with fewer than five employees). In the economy as a whole, over the period 1981-1991, firms employing 200 or more workers increased their share of manufacturing value added, while smaller firms reduced their share. Thus, although the beneficiaries grew faster than the non-beneficiaries of the same size, neither group grew as rapidly as did larger firms.

5.6 While employment grew less rapidly in FOPINAR firms than in the control firms, more broadly, in Ecuador between 1981 and 1991, firms employing 20 or more workers expanded their share of employment, while those with 10-19 workers reduced their share (no data are available for smaller firms). Thus, it appears that the SSE loans were targeted at the less dynamic firms.

5.7 Initial job creation by FOPINAR firms during the entire period was higher than projected at the time of appraisal. However, these appraisal estimates are questionable on a number of grounds. For example, low survival rates among firms—32 percent in 1996 among the firms that borrowed under SSE I and II in the early 1980s—meant that the benefits from job creation diminished dramatically over time.

5.8 The SSE loans do not appear to have led to improved income distribution. Small firms in Ecuador did not enjoy much of an advantage in wage costs for unskilled workers. Furthermore, since employment grew more slowly in FOPINAR firms than in control firms, and more slowly in small firms than in larger ones, the objective of creating low wage jobs was not furthered by the SSE loans. FOPINAR credit also did not go to the poorest entrepreneurs. FOPINAR funds did promote geographical dispersion, but it is not clear that such an objective was consistent with that of efficiency.

5.9 FOPINAR credit was advantageous for the borrowers; it was longer term and often cheaper than other sources of credit. FOPINAR supported new projects, but did not provide a breeding ground for growth of firms: during the 1990s the graduation rate of firms from one size category to the next (defined by number of employees) was lower for FOPINAR firms than for firms in the control group.

The financial sector and credit availability

5.10 Bank support for SSEs through FOPINAR did not contribute to financial deepening. Indeed, one could argue that its disbursement of funds at deeply negative interest rates contributed to financial instability and slowed the more basic reform needed by the financial sector. Credit to industry in a deeply repressed financial sector was achieved by the Government's strategy of borrowing abroad and providing funding through directed credit lines operated by the Central Bank. The financial policy regime gave little emphasis to domestic resource mobilization.

5.11 The FOPINAR program did not lead to a sustainable increase in the level of long-term credit available for SSEs. The large majority of SSEs interviewed, both beneficiaries and control firms, had access to credit in the formal market (excluding FOPINAR funds). The survey does not show the situation in the early 1980s, at the beginning of the SSE loans, but another survey undertaken at that time revealed a lower rate of access to credit. It is difficult to attribute the increase in access to the FOPINAR program, however, since the macroeconomic situation in the two periods was very different. It can be said, however, that the program did not increase the general availability of term credit to SSEs, since long term credit has not increased in Ecuador, and only a tiny fraction of what long-term credit there is from private banks (outside of FOPINAR funds) goes to SSEs.

5.12 In comparison to characteristics of successful directed credit programs in East Asia, the FOPINAR program was flawed. Interest rates were subsidized; fixed interest rates made the subloans inflexible in the face of a changing economic environment; loans were directed to private firms, but with very high limits (in the first three loans); FOPINAR was well managed, but its credibility was undermined by negative interest rates and declining profitability; and the targeted assistance did not reach the appropriate entrepreneurs, those facing fewer distortions and who were more productive.

5.13 Bank support for SSEs improved PFI profitability, but this profitability has very little to do with the effective provision of financial services. This support has come at great expense in terms of subsidized interest and high spreads to uncompetitive PFIs.

Lessons learned

5.14 *Indicators of success.* Disbursement rates, default rates and initial employment creation are not accurate measures of the outcome of a financial intermediary project, particularly when it is undertaken in a distorted economic environment. Despite satisfactory performance on all of these measures, the SSE loans in Ecuador have not had a cost effective impact on the country's economic development. To measure the success of a project, information is also needed on its longer term impact in real terms on the beneficiary enterprises, and the economic costs of providing such assistance.

5.15 *Good institutions cannot overcome a weak policy environment.* The results of this impact evaluation provide quantitative evidence to reinforce the lesson, also flagged in the PARs for the first three SSE projects, that it is important to remove distortions in the economy—get the prices right—before undertaking financial sector lending. FOPINAR may well have been a relatively effective second tier lender for small and medium enterprises. However, its operation within a very disrupted financial and macroeconomic environment did not contribute to a better functioning financial sector.

5.16 *Project design under macroeconomic instability.* Political changes, in conjunction with exogenous shocks, resulted in some major policy reversals during implementation of the SSE program. While election results and shocks are often unpredictable, the Ecuador experience attests to the need for caution in designing projects whose success hinges on politically controversial reforms, particularly in the period leading up to elections. In particular, the use of fixed or below market interest rates for subloans precluded the possibility of responding flexibly to changes in the financial environment. It also resulted in very large and open-ended subsidies, whose level was determined by the rate of inflation, rather than by policy-makers.

5.17 *Directed credit for Bank lending for micro and small enterprises.* Bank lending to small and medium scale enterprises was premised in part on the assumption that such lending would support efficient, labor intensive growth, an assumption that proved to be unfounded in Ecuador. The case of Ecuador underlines the need for caution in targeting lending with insufficient information and without verifying the underlying assumptions. More importantly, there is no obvious reason why it took more than eleven years after the approval of the first loan for the interest rates on subloans made under the projects to be set at approximately market levels.

5.18 The findings of this study contrast sharply with those of a similar study of lending for small and medium scale industrial enterprises (SMIs) in Sri Lanka (World Bank, 1997). The latter study concluded that in Sri Lanka, support to SMIs has been a relatively effective employment program. Much of the variation between the two country experiences was due to differences in the macroeconomic environment and in the extent and timing of adjustment. However, a very basic difference was that the Sri Lankan program was able to achieve positive on-lending rates shortly after lending initiation. In Ecuador this status was not achieved until the fourth loan, some 12 years after the first loan was approved. These contrasting experiences highlight the need for careful analysis of individual country conditions before undertaking such projects.

The Macroeconomic and Financial Setting

Major Macroeconomic Developments

The Ecuadorian economy, 1970s to the present

1. Ecuador experienced an oil boom that lasted until the late 1970s. In retrospect, although this allowed the country's economic growth to accelerate, mainly in the areas of manufacturing and services, it also created significant macroeconomic imbalances that accumulated from 1977 onwards. The annual rate of real GDP growth during the decade was almost 8 percent; inflation accelerated to two digit levels; manufacturing output rose 150 percent; and exports (1975 prices) almost tripled by 1980. However, the non financial public sector (NFPS) deficit deteriorated, reaching a level of about 5 percent of GDP in 1977-1978, and again in 1980. Similar imbalances were observed in the external sector, which showed a deficit of close to 6 percent of GDP in 1980. Most of these imbalances were financed with increasing levels of external debt.
2. During these years, the nominal exchange rate remained fixed, leading to a real appreciation of the sucre. At the same time, interest rates were maintained at a fixed level during most of the period, becoming negative in real terms. While tariffs and surcharges were used to restrict imports, provide protection, and raise fiscal revenues, they were lowered across the board beginning in 1974, in particular for intermediate and capital goods. As a whole, these policies, together with those relating to Andean Pact developments, stimulated the expansion of the manufacturing sector.
3. During the early 1980s the NFPS deficit continued to grow, reaching about 7 percent of GDP. The current account deficit grew to nearly 9 percent of GDP. However, the debt crisis and the declining terms of trade in 1983 brought an end to this unsustainable disequilibrium. Ecuador entered a period of macroeconomic adjustment in an effort to stabilize the economy and create the basis for a sustainable economic recovery.
4. The first adjustment program was adopted gradually, beginning in May 1982, to cope with the foreign exchange constraint determined by the increase in world interest rates and the subsequent external debt crisis. The aim was to reduce macroeconomic disequilibria, to stem the loss of international reserves, and to reduce relative price distortions (mainly the exchange rate and cheap public goods and services). In addition to the adverse events mentioned above, the economic program had to confront other exogenous shocks, such as declining terms of trade and severe crop-damaging floods. As a result of economic adjustment, the financial position of the NFPS improved in 1983 and 1984 to a small deficit of less than 1 percent of GDP and the current account disequilibrium declined to about 2 percent of GDP; annual inflation fell from a peak of 60 percent in September 1983 to 20 percent in September 1984; the country was able to reschedule its external commercial debt; and real GDP grew at a rate of 4 percent in 1984 and 1985 after a contraction of almost 3 percent in 1983.
5. In spite of the adjustment measures taken, however, the stability of the Ecuadorian economy remained precarious. Hence, the significant decline in oil prices in 1986 and the earthquake of March 1987 that disrupted oil production and exports, renewed economic instability. Net international reserves became negative in these years, macroeconomic

imbalances (fiscal and external) rose to about 10 percent of GDP in 1987, and inflation accelerated to 85 percent by the end of 1988. Moreover, Ecuador stopped paying interest on medium and long term commercial debt beginning in 1987.

6. A new adjustment effort was adopted in late August 1988 to correct imbalances, reduce inflation, reestablish a sound level of international reserves, and correct relative price distortions. As a result of the new economic program, as well as of the marked increase in oil prices in 1990, a broad-based expansion of economic activity was observed in 1991-92, with output growing at an annual average rate of 4 percent, the consolidated public sector deficit (including the Central Bank) falling to 2.2 percent of GDP, and net international reserves rising to US\$600 million. However, inflation fell less than expected, to an annual rate of 50 percent through mid-1992; the external current account deficit declined only to about 6 percent of GDP in 1991; and arrears continued to accumulate on external debt, although in mid-1989 Ecuador resumed partial interest payments to commercial bank creditors at a rate of about one third of interest obligations.

7. On the other hand, important structural reforms were implemented towards a more market oriented economy. The main change were the creation of a Value Added Tax (VAT) and a tariff reduction. The foreign investment and mining codes were changed to stimulate foreign participation, and some flexibility was introduced in the labor market. The Central Bank was prohibited from giving loans to the private sector, including SSEs.

8. The Duran Ballén administration that assumed office in August 1992 adopted a number of measures to reduce inflation, strengthen the balance of payments, and create conditions for sustained growth. In particular, the authorities substantially adjusted public sector prices, devalued the sucre, and abolished controls on interest rates. The rate of inflation fell to 25 percent in 1994, private capital inflows rose, contributing to a significant increase in international reserves, and the combined public sector balance rose to a surplus of 0.4 percent of GDP by 1994. Output growth recovered to 4.3 percent in 1994 (2.0 percent in 1993) mainly on the strength of the activity in the construction and manufacturing sectors, spurred by a credit boom to the private sector and increases in real wages. Relations with external commercial creditors were normalized in early 1995.

9. A number of exogenous and political shocks rocked the Ecuadorian economy in 1995. In spite of these events, the stability of the economy was maintained (in contrast to the previous stabilization efforts that had not resisted new shocks), as a result of a prudent short term policy based on fiscal austerity and high real interest rates. The inflation rate declined slightly to about 23 percent, the external current account fell to 4.6 percent of GDP, international reserves fell somewhat as private capital inflows stagnated, and the combined public sector balance showed a moderate deficit of 2.2 percent of GDP. On the other hand, output growth decelerated to a rate of 2.3 percent, with manufacturing and construction sectors particularly hard hit.

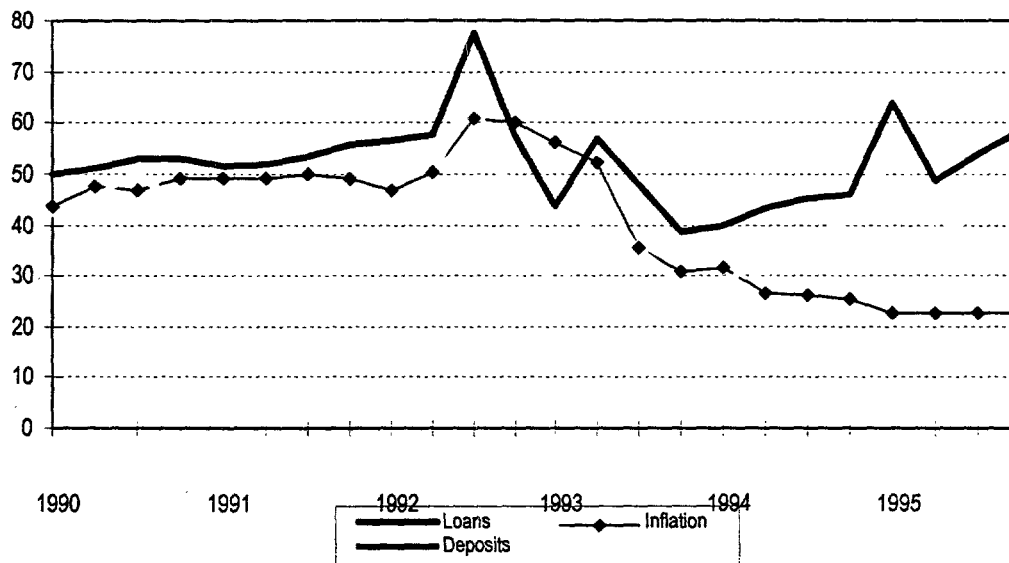
Interest rates, exchange rates, tariffs, and wages

10. Historically, *interest rates* in Ecuador were determined administratively. During the period under analysis they were controlled until August 1984 at levels below the inflation rate. SSEs had access to several preferential credit lines, at even lower interest rates, through the so-called "Fondos Financieros" of the National Development Bank, and via FOPINAR of the National Finance Corporation (CFN), largely World Bank funds. While the annual inflation rate

was more than 50 percent towards the end of 1983, loan interest rates were 19 percent in general and just 10 percent for the SSEs.

11. Under the Febres-Cordero Government, beginning in August 1984, some flexibility in interest rate policy was followed: interest rates were market determined for non preferential operations. Interest rates for the SSEs remained negative in real terms, although much less so than before, given the lower rate of inflation. In December 1986, annual inflation was 19.8 percent while interest rates on SSEs loans were about 18 percent. Towards the end of the 1980s, loan and deposit interest rates were linked through a maximum interest margin set by the Monetary Board. At the same time, preferential loans to the SSEs were granted, mainly with foreign resources, at a rate tied to the average deposit rate paid by the banking system. During most of the 1990s, interest rates have been determined by the market. While at the beginning of the decade real interest rates were relatively modest and stable, high real interest rates have been the norm since 1994 (Figure 1).

Figure 1: Interest Rates and Inflation
(1990-1995 Quarterly data)

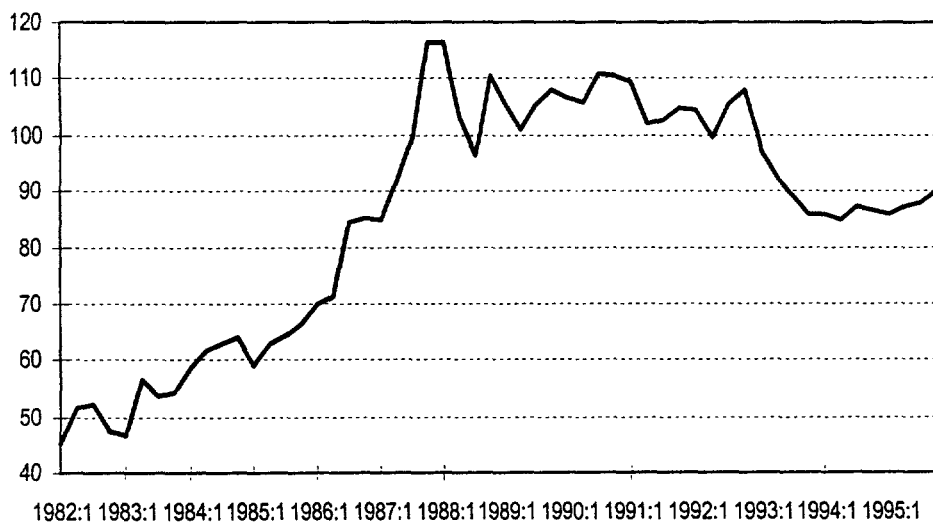


Source: Banco Central del Ecuador.

12. In recent years, preferential credit lines for SSEs have been reduced essentially to the FOPINAR mechanism. FOPINAR loans carry an interest rate linked to the deposit rate, usually positive in real terms but lower than the prime market rate. In spite of the benefits implied by the preferential interest rates to the SSEs, many were not able to take advantage of this mechanism, because they were not considered creditworthy by the banking system, or because they were required to have an excessive amount of collateral, not to mention the cumbersome administrative procedures required for the loans.

13. An important component of the post-1982 adjustment programs was the *exchange rate policy*. The objective of the first program was to reverse the real appreciation of the sucre that had accumulated in previous years. This was achieved through step devaluations beginning in 1982, followed by a crawling-peg system that adjusted the exchange rate daily until August 1984. Following this period, a fixed exchange rate policy was implemented for about two years. Then, in August 1986 a dirty floating was implemented until mid-1988. As a result of the adverse external and political shocks in 1986 and 1987, the real depreciation of the sucre accelerated, since inflation rose with a lag. During the period 1988 to 1992 the real exchange rate showed more stability in the context of the second adjustment program. In general, through most of the 1980s, the sucre was depreciated in real terms as noted through the trajectory of the real exchange rate index presented in Figure 2. In principle, the real depreciation trend observed through most of the decade should have favored the tradable sectors in the economy, including the manufacturing sector.

Figure 2: Real Exchange Rate
(Quarterly data, 1982-1995)



Source: Banco Central del Ecuador.

14. The most recent stabilization program (from 1992 to the present) used the exchange rate as the nominal anchor. As a result, there has been a trend towards a real appreciation, in spite of the trade liberalization adopted in previous years. This trend was partly reversed by the adverse external shocks that hit the economy in 1995. Although the combination of exchange rate and trade policies tended to affect adversely the performance of the industrial sector, manufacturing activities were able to overcome these difficulties in the context of a more stable economy, accelerating their growth rate.

15. The most relevant reform in relation to the industrial sector is the *trade liberalization* adopted between 1990 and 1992. The level of tariffs had not changed significantly during the 1980s, except in January 1986 when they were lowered. However, protection was afforded through a number of other mechanisms, such as the surcharges, import prohibitions and quantitative restrictions, the requirement of external funding for imports, and the imposition of other non-tariff costs. The dispersion of tariffs in the manufacturing sector was large, and about one-quarter of the industrial sector was subject to quantitative restrictions. Many of these restrictions remained in place up to 1989, when a thorough tariff reform was adopted. Table 1 shows the evolution of the nominal protection during the 1980s, before the tariff reform, and an estimate for 1992.

Table 1: Rate of Nominal Protection
(Tariff plus surcharges. Arith. Average)

	1980	1985	1989	1992
Consumer goods	64%	100%	65%	n.a.
Intermediate goods	17%	28%	20%	n.a.
Capital goods	16%	47%	33%	n.a.
All goods	21%	51%	37%	9%

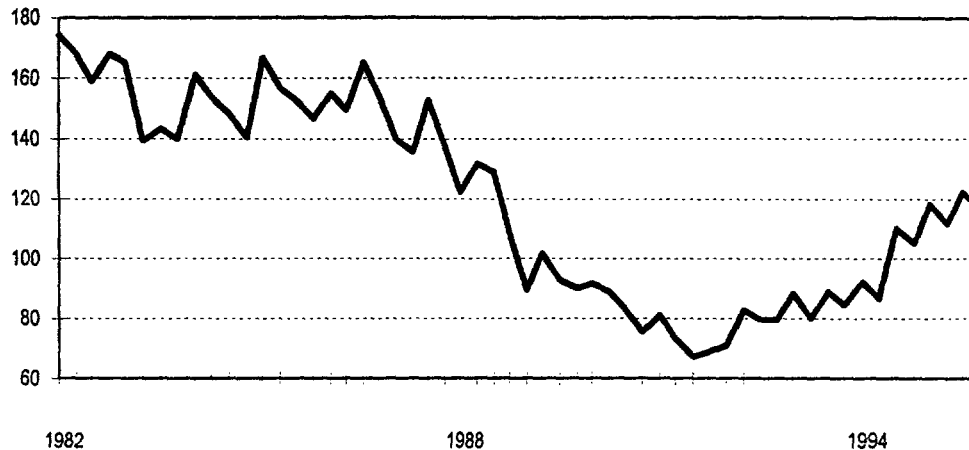
Source: For the period 1980-1989, World Bank, 1990b. For 1992, World Bank, 1994.

16. The trade liberalization adopted between 1990 and 1992 lowered tariff rates and reduced their dispersion notably. The level of effective protection should have been reduced, but data are not yet available to evaluate the success of the reform in this respect. As a complement to the tariff reform, a free trade zone was negotiated with the rest of the Andean countries, and finally established in 1992, although in the end the agreements did not include Peru. Given the lack of information, it is not clear whether the establishment of the free trade zone affected the manufacturing sector in the short run. In any case, the increase in exports to Colombia—mainly manufactured goods—is remarkable, from US\$32 in 1990 to US\$252 in 1995. Exports to Venezuela doubled in the same period, to US\$34.1.

17. *Wage policy* has also been a crucial element of the macroeconomic programs. From 1982 until 1992, real wages (in sucres), measured in terms of the minimum wage plus other additional payments, have fallen.¹ Thus, labor costs remained low up to 1992, and should have stimulated employment. Since 1992, minimum real wages have recovered significantly (Figure 3). The recovery is even more pronounced if measured in US dollars, given the real appreciation of the sucres in these years.

¹The evolution of average real wages would be a preferred measure, but such data are not available.

Figure 3: Index of Real Minimum Wages
(Quarterly data, 1982-1995, January 1990=100)



Source: Banco Central del Ecuador.

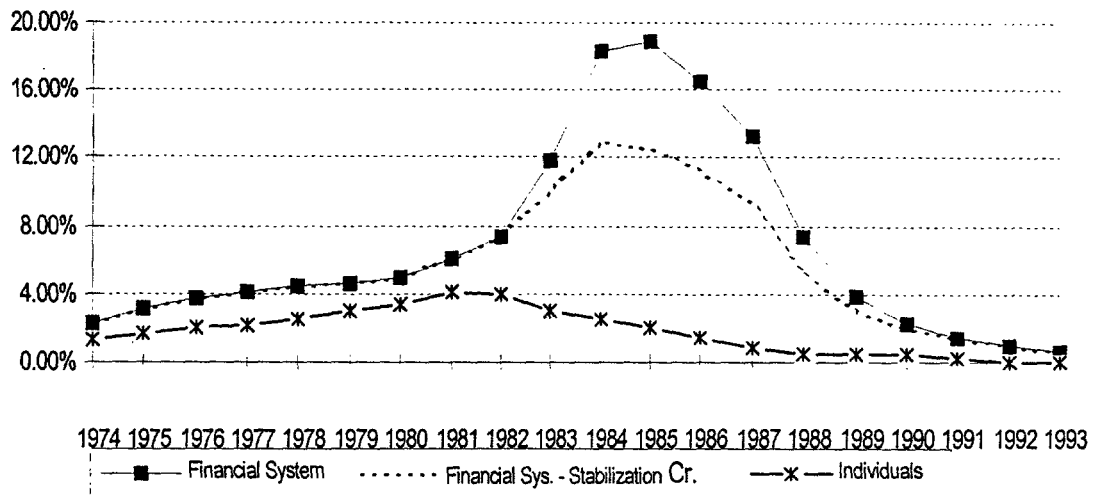
18. Until June 1991 SSEs faced preferential (lower) minimum wages. Although the trend of minimum wages should have been very similar to those of the rest of the industrial sector, lower wages may have made SSEs more competitive. In spite of this, the SSEs did not expand employment, because of inflexible and burdensome labor laws that imposed a high cost for laying-off workers, making it difficult for the employer to adapt to changing economic conditions or technologies.

Development of the financial sector

Financial policies of the 1970s and early 1980s

19. The petroleum boom in Ecuador led to a significant expansion in the financial sector in the 1970s. Petroleum resources were channeled via the Central Bank to the financial sector at subsidized rates. Between 1974 and 1982, Central Bank credit to the financial sector grew from 2 percent to 7 percent of GDP (Figure 4). This abundance of inexpensive credit led to a proliferation of financial institutions. Between 1973 and 1982, the number of private banks increased from 21 to 32, the capital of private banks more than doubled in real terms, and total assets of banks grew at an average rate of 10 percent per year (in real terms), compared with an average rate of growth of real GDP over the period of about 6 percent (Arizaga and Bayás 1990, p. 293).

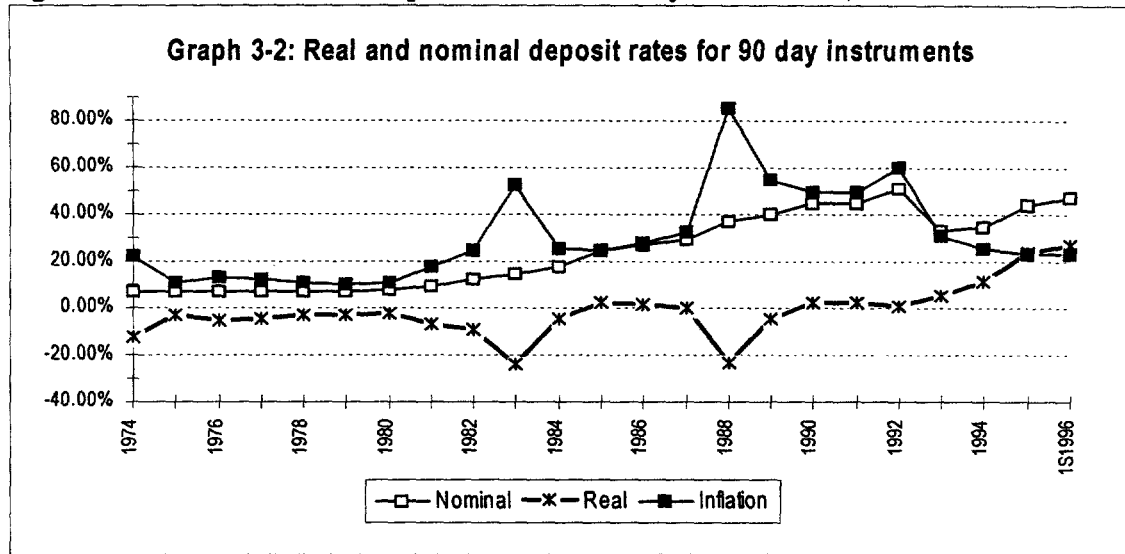
Figure 4: Central Bank Credit to the financial System, 1974-1993
(percent of GDP)



Source: Annual Reports, Central Bank of Ecuador.

20. Economic groups were behind part of this expansion of the financial sector. They had a great incentive to own and control financial intermediaries. Control of a financial intermediary meant easy access to the preferential credit of the Central Bank. The financial intermediary would direct a good share of its credit to members of the group at favorable rates. (According to some estimates (Camacho, 1992), as much as 70 percent of the loan portfolio of some Ecuadorian intermediaries represent loans to related parties.) The result: a misallocation of resources to activities that are not necessarily the most profitable, and an overexposure of financial institutions' loan portfolios to the risks of one borrower—the economic group. Thus, the economic group benefited at the expense of the health of the financial institution. Once the economic group began to experience financial problems, so would the financial institution.

21. Over time, the financial sector became more and more dependent on the Central Bank as a source of funds. This was the result not only of the steady flow of resources to the financial sector from the Central Bank, but also because a policy of fixed nominal interest rates discouraged financial savings or financial deepening. Mobilization of financial resources by the financial system faltered. Throughout the 1970s, interest rates on time deposits were fixed at 7 percent, while inflation hovered around 10 percent (Figure 5). The acceleration of inflation in 1981 led the Monetary Board to begin a process of discrete changes in the nominal interest rates. However, such changes fell behind inflation, and savings rates remained negative in real terms.

Figure 5: Real and Nominal Deposit Rates for 90 Day Instruments, 1974-1996

Source: "Información Estadística Mensual", Central Bank of Ecuador

22. To the distorting effects of a fixed interest rate policy was added that of a fixed exchange rate system during 1970-82. Over this period, the sucre became increasingly overvalued as a result of domestic inflation exceeding international levels. The free convertibility of the currency at a fixed rate, along with the inability of the financial sector to mobilize domestic resources, created the incentive for financial institutions and other businesses to borrow abroad. External debt increased from about US\$500 million in the mid-1970s to US\$7 billion by the mid-1980s (Swett 1989, p. 9). In addition, the shortage of domestic credit (given the demand at negative or near-negative interest rates), the illusion of stability of the exchange rate, and the availability of international commercial credit encouraged financial institutions to guarantee short-term loans from foreign commercial banks to local firms without careful evaluation of the exchange rate risks to which they were exposed.

23. Ecuador's fragile financial system was subjected to a number of exogenous shocks in the early 1980s. Oil prices softened during 1981, leading to a series of devaluations of the sucre, beginning in May 1982. This, together with rising international interest rates to levels bordering on 20 percent made payments on dollar-denominated debt extremely expensive. Second, August 1982 brought the debt crisis when Mexico announced the cessation of interest payments on its external debt. As a result, foreign loans dried up for all Latin American countries. Capital inflows in Ecuador fell from 4 percent of GDP in 1981 to -3 percent of GDP in 1982. Debtors could no longer increase borrowings to make interest payments. Banks not only faced costly debt payments on their own external borrowing, they were also called to make good on their guarantees of clients' borrowing when those clients could no longer service the foreign debt they contracted.² Past-due loans relative to total capital grew to 164 percent in 1983 (Arizaga and Bayas 1990, p. 311).

² To further complicate matters, Ecuador suffered a natural disaster of heavy floods during 1982-83. "El Niño" current brought torrents of rain which devastated banana plantations, destroyed shrimp farms, flooded rice fields, and cut off access to roads, causing production losses estimated at 2.5 percent of GDP (Swett 1989, p. 12).

Financial sector reforms of the 1980s

24. The reduction in the amount of petroleum resources available to the financial sector through the Central Bank, the fall in funding from foreign sources, and the problems of financial sector stability resulting from the excessive foreign debt burden led Ecuador to undertake a series of measures to improve the functioning of the financial sector in both the short- and longer-run. The initial response to the crisis was to bail out the financial sector through the "sucretization" of foreign debt: the Central Bank absorbed the foreign debt of the private sector in exchange for sucre-denominated debt in 1983-84, thereby accepting the foreign exchange risk. The sucretized debt had a favorable but adjustable interest rate, a maturity of three years, and a commission for exchange rate risk. However, the maturity was later extended to seven years without any exchange rate risk premium after the third year. Largely as a result of this policy, Central Bank credit to the financial sector grew from 7 percent of GDP in 1982 to a peak of 19 percent of GDP in 1985 (Figure 4).³ The stabilization credits grew to as much as 48 percent of the loan portfolio of intermediaries (Camacho 1992).⁴

25. The second response was to liberalize interest rates in an effort to empower the financial sector to attract deposits. In April 1985, interest rates on large time deposits with a minimum maturity of 90 days were freed, along with interest charges on loans granted with these funds. In August 1986, all savings and lending interest rates were liberalized, with the exception of rates on loans made with Central Bank and external resources. Around this same time, forced investments were significantly reduced, giving financial institutions greater flexibility in the allocation of credit.

26. The Borja Government reinstated interest-rate controls in August 1988, when the Monetary Board established a maximum margin of 19 percentage points between the lending rate and the savings deposit rate, reduced in 1989 to 15 percentage points. While this margin may seem high at first glance, it was not so high given a reserve requirement on monetary deposits of 30 percent, subsidized interest on preferential loans (made with Central Bank funds or external resources) and the continued existence of some forced investments.⁵ The Monetary Board finally eliminated the spread ceiling in September 1992.

27. The liberalization of interest rates brought real rates to positive levels (1985-87) and dramatically increased financial deepening as financial institutions were able to attract deposits. The unanticipated acceleration of inflation in 1988 (from 33 percent in 1987 to 86 percent) forced real interest rates to negative levels once again and brought about capital flight. The reregulation of interest rates in 1988 probably also contributed to the fall in financial deepening as non-bank institutions (such as intermediation companies and leasing companies) intermediated a greater share of funds.

³ Central Bank credit to the financial sector grew as a percent of GDP between 1982 and 1984 even without the sucretized debt. During this time, the Central Bank made some effort to replace the dramatic decline in external funds (reflected in the fall in international reserves) with domestic credit to the private sector.

⁴ By 1987, less than one percent of the stabilization credits had been paid to the Central Bank, even though they represented a significantly smaller share of the loan portfolio as a result of their shrinkage in real terms.

⁵ Forced investments included a requirement that 10 percent of banks' commercial portfolio be dedicated to agriculture and small scale enterprises at subsidized rates (virtually eliminated in 1991).

28. The final response to the financial crisis was a structural adjustment of the financial sector in 1987-88, supported by the World Bank. While the sucretization program avoided a collapse of the financial system, at a high cost to the Central Bank, it was far from sufficient to guarantee the financial soundness of intermediaries. Studies of the Superintendency of Banks and the World Bank demonstrated that many banks and finance companies were insolvent or nearly so, even though their financial statements looked satisfactory,⁶ and that many had a high concentration of credit to related parties. The structural adjustment consisted in strengthening prudential regulations of financial intermediaries, further reducing the dependence of the financial sector on Central Bank resources, and rehabilitating or liquidating problem institutions.

29. Reduction in the dependence of the financial sector on the Central Bank was accomplished by restricting the amount of preferential credit granted through private financial institutions to the private sector. As a result, the share of preferential credit in total credit fell from 53 percent to 41 percent between 1984 and 1986. The number of different credit lines at the Central Bank was also reduced, and the interest rates charged on Central Bank credits were brought more in line with market rates. Over time, the amount of credit from the Central Bank was continuously reduced until the new Monetary Regime Law of 1992 finally eliminated the financial intermediation function of the Central Bank.

30. The adjustment measures were successful from a number of points of view. In general, they improved the soundness of the financial sector. Provisions as a percent of past-due loans for private banks increased from 27 percent at end-1987 to 48 percent at end-1989 at the same time that past-due loans as a percent of total loans decreased; the capital-to-asset ratio for banks increased from 7 percent at end-1987 to 10 percent by end-1989; and Central Bank credit to the financial sector fell from 13 percent of GDP in 1987 to 4 percent in 1989.

Financial sector in the 1990s

31. The financial sector reforms of the 1980s generally fulfilled their objectives of improving the health and strength of the financial sector and reducing the dependence of financial institutions on the Central Bank. Nevertheless, the financial sector entering the 1990s was still in need of reform. It was void of a well-functioning capital market, due in part to an outdated legal framework, along with the policy of fixed interest rates, the availability of inexpensive funding through the Central Bank, and the macroeconomic instability. It was also highly segmented, largely as a result of restrictive legislation and regulatory differences across types of financial intermediaries. The Capital Markets Law (May 1993) and the Financial Institutions Law (May 1994) were passed in an effort to correct some of these remaining problems.⁷

32. The main objective of the Capital Markets Law was to promote an organized and integrated market that is efficient and transparent. Capital markets activity boomed in 1993 and 1994, relative to prior years. While such activity may not have been possible without the legal infrastructure provided by the Capital Markets Law, greater macroeconomic stability was also a factor. Capital markets activity slowed again in 1995 as Ecuador entered a period of great uncertainty and economic recession as a result of various factors: early in 1995, Ecuador

⁶ Poor accounting norms of the time hid the true financial condition of financial institutions.

⁷ The Financial Institutions Law was amended in July 1996. This discussion takes into account those amendments.

engaged in an armed conflict with Peru; an energy crisis reigned throughout most of the year; and a political crisis culminated in the resignation of the vice-president, Alberto Dahik, the head of the economic stabilization program. The environment in 1996 thus far has also not been conducive to capital markets development as interest rates have remained high and the course of the newly elected government (July 1996) remains uncertain. Capital markets may experience more dynamism if the new administration is able to implement its recently announced economic plan which entails the reform of the social security system (pension plans) and the privatization of state enterprises.

33. The main objective of the Financial Institutions Law was to rationalize the structure and regulatory environment of the financial sector. Going into the 1990s, the financial sector was made up of numerous financial intermediaries of various kinds.⁸ This segmentation of the market was largely due to restrictive legislation allowing subjected institutions to engage only in an express list of activities and the lack of a common regulatory framework for all institutions. Both factors gave rise to financial groups made up of a bank plus other financial intermediaries that could do things that the bank could not do directly or that had a lower regulatory burden. The law limited to four the kinds of private financial intermediaries that can operate in Ecuador and provided incentives for members of financial groups to merge by leveling the regulatory playing field and by granting banks greater operational flexibility.

34. The financial sector experienced rapid growth in 1993 and 1994 as a result of financial liberalization, deregulation and macroeconomic stability. However, hard times returned in 1995. Real interest rates soared (Figure 1) and the productive sector entered into recession. Deposit growth also slowed. Institutions faced liquidity problems as the quality of their credit portfolios deteriorated.⁹ The year 1996 has only recently brought some relief. During the third quarter of 1996, the referential lending rate fell 9 percentage points in real terms and the real referential borrowing rate fell 13 points, largely as a result of the Central Bank easing of monetary and exchange rate policy.

35. After passage of the Financial Institutions Law, many new financial institutions entered the market. By the end of 1995, new and existing institutions were confronting a difficult situation and began to request liquidity loans from the Central Bank. In November 1995, the Banking Board, governing body of the Superintendency of Banks, imposed a three-year moratorium on new entrants into the fragile financial system. Several mergers and acquisitions took place at the end of 1995 and early 1996, and the Central Bank intervened in a large bank, bailing out depositors in an effort to avoid the systemic risk implications of a liquidation in a fragile financial system. This bank "failure" showed that the Superintendency of Banks does not know what is going on in the institutions it regulates. In addition, the failure pointed to a grave weakness of the Financial Institutions Law: it does not grant the authorities the power to take over a troubled institution without the owners' consent, except in the case of a liquidation, limiting the authorities' ability to act quickly and take corrective action.

⁸ While the number of intermediaries grew from 80 to 112, excluding cooperatives, between 1987 and 1993, financial deepening declined. The growth in the number of financial intermediaries also does not seem warranted given the small size of the Ecuadorian financial sector. Empirical evidence suggests that Ecuador is overbanked (Jaramillo, Samaniego and Salazar 1993). Colombia's private banking sector, for example, is about four times the size of Ecuador's, with fewer banks.

⁹ In spite of the slow-down in deposit growth, financial deepening advanced in 1995, largely as a result of the slow-down in economic activity (GDP growth).

36. Thus, the financial sector, its legal framework and supervisory authority still have weaknesses. However, in November 1996, President Bucaram announced some new reforms, including institutional reform of the Superintendency of Banks, with an eye to eventually merging it with the Central Bank, and the creation of a Deposit Insurance Fund. These reforms, if passed by Congress should help to strengthen supervision and increase stability of the financial sector.

The environment for small scale enterprise lending

37. Just over ten years ago, the financial sector was highly dependent on the Central Bank and foreign banks for funds, and it functioned in a world of fixed interest rates. Today, with market determined interest rates and no credit from the Central Bank, the financial sector competes on price terms to attract deposits. The financial sector reforms of the 1980s made some necessary adjustments to adapt the legal and regulatory framework to the new environment. They shifted regulatory attention away from monitoring compliance with interest rate controls, forced investments, and Central Bank credit policies toward compliance with prudential standards, such as capital and provisioning requirements.

38. However, given the context of financial crisis in which the 1980s reforms were implemented, deregulation and liberalization did not go much beyond interest rate policy. The regulatory burden faced by financial institutions, especially banks, was excessive entering the 1990s. Banks escaped this burden to some extent by creating foreign subsidiaries and non-bank financial institutions that were not subject to the same restrictions. With the Financial Institutions Law, Ecuador followed the trend set by many countries to deregulate banking activities because of the futility of trying to control them in a global financial environment. Like other countries, Ecuador has shifted further away from the regulatory model of the past that set limits on activities and operations, toward the new regulatory model that focuses instead on controlling bank risk through prudential standards and market discipline.

39. In general, the evolution of Ecuador's financial sector should have paved the way for greater voluntary lending by financial institutions to SSEs. One of the greatest historical impediments to SSE lending in Ecuador was interest rate controls. Only in September 1992 were interest rates fully liberalized. The low or negative real interest rates that resulted from financial repression inhibited financial deepening. Financial institutions depended on the Central Bank for funds. The limited availability of Central Bank credit, especially after the mid-1980s, forced financial intermediaries to ration credit. Not only did intermediaries have an incentive to channel available credit to members of their economic group, fixed interest rates or regulated spreads also favored lending to larger enterprises, since higher transactions costs make lending to SSEs commercially viable only at relatively high rates.

40. Another impediment to SSE lending in Ecuador was the lack of competition in the financial sector. Although Ecuador has always had what may be considered an excessive number of intermediaries, many were formed to serve the interests of economic groups. SSEs were generally outside of the economic groups that surrounded financial institutions. While the reforms of the 1980s tried to limit lending to related parties, the regulation was nearly impossible to enforce. In addition, the Superintendency of Banks did not allow entry of any new banks into the Ecuadorian market for many years, until the Financial Institutions Law was passed in 1994, allowing free entry by institutions meeting minimum requirements. In addition, it set clearer and stricter limits for lending to related parties. Theoretically, these changes should help to make the

market more competitive and direct a greater share of lending to parties not related to the financial institutions.

41. A final factor that may have contributed to greater SSE lending over time is the CFN's second-tier lending program to SSEs, discussed more fully below. With the help of external funding from World Bank and other sources, the CFN through its FOPINAR program has channeled funds through the private intermediaries to SSEs. One objective of the FOPINAR program was to help participating financial institutions (PFIs) gain the special skills necessary to make SSE lending viable. Institutional impediments to long-term lending to SSEs were seen as a market failure that could be corrected if financial institutions could gain experience and a level of expertise in SSE lending.

42. It is usually argued that when financial institutions lack experience with SSE lending, transactions costs are exceedingly high. Therefore, the interest rate required to make SSE lending as profitable as lending to LSEs would have to be very high. However, such high interest charges would likely increase the risk of default on the SSE loans, so much so as to outweigh the direct effect of the high interest rates on the lender's rate of return. As a result, loans to SSE applicants may not be disbursed at all. When there is greater familiarity of financial institutions with SSEs, they can identify the riskiness of projects among SSEs because of the knowledge they have of the conditions under which such projects succeed. Section 5.B of this paper will evaluate, through structured interviews with a number of PFIs, the contribution of the FOPINAR program to correcting this market failure.

43. In spite of the improved environment for SSE lending, several factors have favored LSE lending: macroeconomic instability, a weak Superintendency of Banks that is unable to control credit concentrations to related parties, and the lack of capital markets development. While the macroeconomy has been well managed over the past several years, future economic policy remains uncertain and past policy has been erratic. Smaller enterprises may have a harder time surviving the effects of macroeconomic volatility than larger enterprises. As a result of the uncertainty, financial institutions may have been hesitant to lend to SSEs.

44. Financial institutions may also continue to favor members of their own economic group, usually to the detriment of SSEs and others squeezed out of credit markets, if the Superintendency of Banks is unable to enforce the new limits on loans to related parties. The Superintendency of Banks is a weak institution with a shortage of qualified staff, and unable to supervise the more sophisticated financial institutions it regulates. Unless it is strengthened, loans to related parties may continue to dominate portfolios of financial institutions.

45. The lack of capital markets development might also be considered a handicap to SSE lending. A deeper, more active capital market would encourage larger firms to borrow directly from the public by issuing debt instruments. Banks and other intermediaries would then need to look for new lending markets. Competitive pressures would force intermediaries to find their niche, lending to consumers, SSEs or larger enterprises. While the new Capital Markets Law lays the groundwork for future capital markets development, competitive pressures from capital markets depend largely on future macroeconomic stability, the reduction of uncertainty and the ability of the new government to advance a privatization program.

46. A more developed capital market might also encourage longer term finance in Ecuador. Long-term loans (greater than one year maturity) accounted for no more than 7 percent of all

loans originated by private banks in each year between 1988 and 1993.¹⁰ Empirical evidence using a sample of 731 Ecuadorian manufacturing firms during the 1984-88 period indicates that the main determinant of the probability of obtaining long term credit is a firm's size (Schiantarelli and Jaramillo, 1996), suggesting that long-term loans to SSEs may have been virtually non-existent, at least prior to 1988.

47. Since 1993, the share of long term credit granted by private banks in total credit granted has ranged widely, from a low of about 2 percent in February 1995 (during the war with Peru) to a high of nearly 16 percent in May 1993. On a yearly basis, the share of long term credit in total credit granted has been between 7 and 9 percent. It is interesting to note that interest rates on short term loans have not varied significantly from that on long term loans. More often than not, long term loans have carried lower rates than short term loans, reflecting embedded expectations that rates will eventually fall.

¹⁰ It is difficult to draw conclusions with these data about the outstanding stock of loans at any point in time. Shorter-term loans may roll-over several times during a year.

The Survey: Sample Characteristics and Data Limitations¹

1. In selecting a sample of *beneficiaries*, the universe of firms was limited according to the three main characteristics of FOPINAR lending, both for the purposed of logistics and in order to improve the robustness of the statistical results. First, we only considered firms that were located in the three major urban centers of Ecuador. Second, the universe was limited to four main industries: food and beverage manufacturing, textiles and wearing apparel, wood products, basic metal products. Third, and most importantly, the sample was limited to those firms receiving loans between 1983 and 1993 (note that interest rates became positive in real terms only after 1992). These three limitations produced a much reduced initial group of 2,222 firms from the original 16,457 beneficiary firms.²

2. To compare beneficiary firm performance with firms that did not receive FOPINAR credits, the survey was also administered to a *control group* of firms. Perhaps a better term would be “quasi control” because it is impossible to re-create in 1996 a group of firms that existed at the same time and had characteristics similar to those of the firms receiving credits. There is no national registry of small firms in Ecuador. The Superintendency of Companies, which is supposed to register all firms, estimates that they actually have about 40 percent of all firms in their data base, but firms registered with the Superintendency tend to be the largest firms. To construct a sample of non-beneficiary (non-FOPINAR) firms we chose instead random samples from the provincial *Cámaras de Pequeña Industria* (CPIs, Chambers of Small Industry) in each of the three provinces and also from the *Directorio Nacional Artesanal* (DNA, National Registry of Artisans). This decision was prompted by the fact that our preliminary surveys of the FOPINAR beneficiaries showed that about 50 percent were members of their provincial CPI and the rest were unaffiliated with any group or affiliated with one or more artisan organizations. The remaining 50 percent of the sampled non-beneficiaries were drawn from the DNA. Figure 1 shows the size distribution of the sample of FOPINAR firms and of the control group, and Table 1 shows some of the characteristics of firms in the two groups.

3. The original sample of FOPINAR beneficiaries was of 440 firms selected from their data base of firms in the four selected industries, located in the three principal cities, and having received loans between 1983 and 1993; 77 of these firms could not be contacted or were wrongly classified. Of the 309 firms that we tried to interview within the FOPINAR sample, 50 declined to participate (in the control group, there were 28 firms of the original sample of 233 firms that refused to participate). Failure rates for FOPINAR beneficiaries are calculated by number of credits granted through FOPINAR and by the year of the last credit authorized by FOPINAR. For example, surveyors attempted to contact a total of 29 firms that received 1 credit in 1984; 17 of the 29 had disappeared or exited the industry. Then the “exit” rate was estimated to be 58.6 percent. Not surprisingly, the exit or disappearance rates are lower the more recent the last credit granted by FOPINAR.

¹ Roberts, et. al., 1997.

² FOPINAR made approximately 18,587 loans to 16,457 firms between 1981 and 1995, compared to a total of 34,000 manufacturing firms in 1980. Many firms have had multiple credits, which explains the difference between the number of beneficiaries and the number of credits.

4. One benefit of using the DNA is that the data bank contains the year that the firm was registered (the registry began in 1986) and does not require that firms pay an annual fee. This allowed us to measure a rate of disappearance or exit for the firms in our sample drawn from this registry so that we could compare these rates to the disappearance and exit of FOPINAR firms. Unfortunately, the CPIs did not have old listings available and tend to update their lists periodically. Thus, firms that no longer pay the annual fee are dropped, but there is no information on why they are no longer affiliated nor do we have the addresses or phone numbers of these firms. Thus, we anticipate some bias in the sampled group of firms from the CPIs because this sample could over-represent the "successful" firms. This means that great care must be taken in interpreting the exit/disappearance statistics for each group.

5. The survey attempted to gather information on production, sales, markets, employment, balance sheets and credit use over time. Ideally, this information should be gathered from the beneficiary firms from the time that they received a loan until the present. However, this information was sketchy and imprecise for many of the small firms that received credits through the FOPINAR program. Gathering comparable data for non-beneficiaries was even more difficult. The survey requested data on production and finances from only three periods: the year of foundation of the firm, 1992 and 1995. Although legally firms are required to keep accounting records from the previous 3 years, only a small percent of firms surveyed keep books even for the current year (of the 218 firms interviewed, only 44 firms had comprehensive accounts which they used to complete the surveys). Thus, almost all the data on production, production costs, accounting statements, etc. are gross estimates. Very few firms recorded their initial employment levels.

6. The survey requested information on the background of the principle entrepreneur, usually the owner/manager of the firm. Socio-economic background, education, training and experience were registered for the interviewed manager. A thumbnail sketch of the firms' history—date of foundation, legal organization, growth, changes in products, etc.—was obtained. Finally, a section on technological change, safety and environmental controls was included.

7. The number of firms for which we can compare pre- and post-1992 growth rates varies depending on the economic indicator. For value added, the number of valid observations drops to 102 firms (83 of them in the categories of firms with fewer than 20 workers). For fixed assets, the number available is only 54 firms (43 in the group of firms with fewer than 20 workers). Finally, comparisons in terms of employment can be made with 140 firms (111 in firms with fewer than 20 workers).

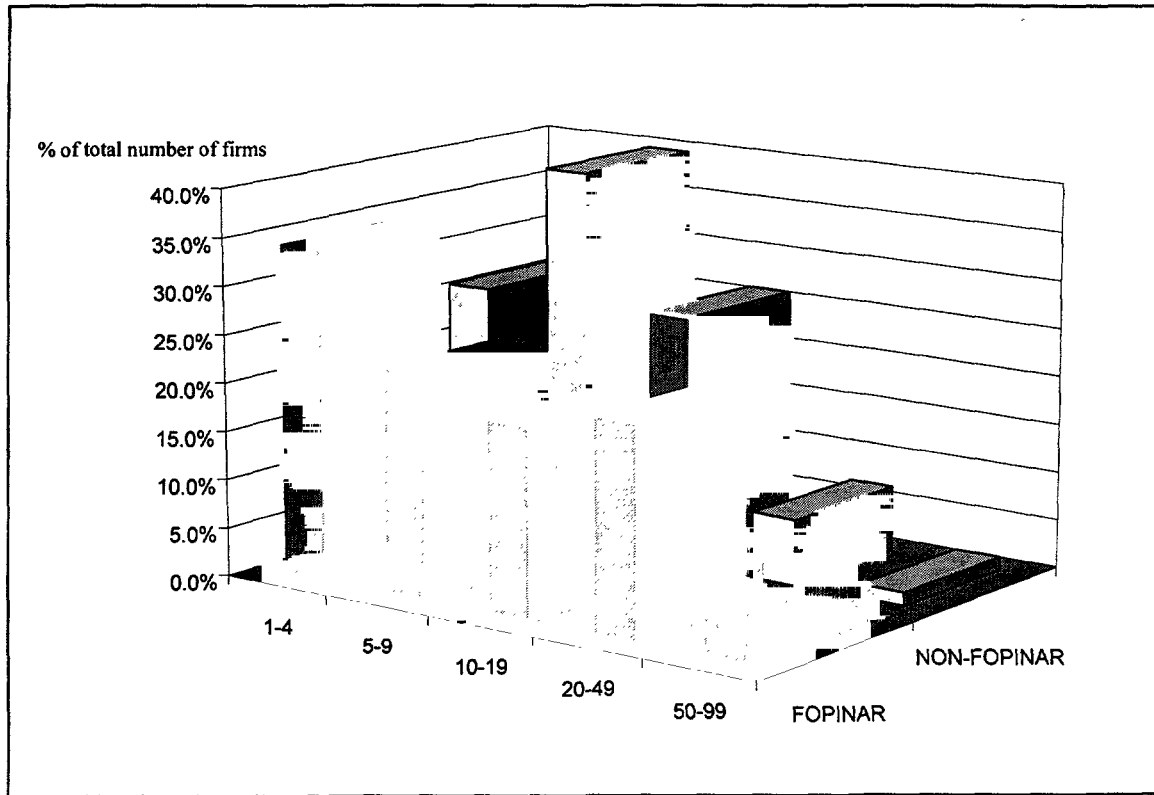
Figure 1: Sample of FOPINAR Beneficiaries and a Control Group, by Firm, Ecuador 1995

Table 1: Characteristics of FOPINAR and Control Groups

	<i>FOPINAR BENEFICIARIES</i>					<i>CONTROL GROUP</i>				
	<i>Firm Size by Number of Employees</i>					<i>Firm Size by Number of Employees</i>				
	<i>1-4</i>	<i>5-9</i>	<i>10-19</i>	<i>20-49</i>	<i>50-99</i>	<i>1-4</i>	<i>5-9</i>	<i>10-19</i>	<i>20-49</i>	<i>50-99</i>
Number of Firms	49	33	28	31	3	19	29	19	5	1
Average Number of Workers	3	7	15	28	56	3	7	13	28	80
Average Number of FOPINAR Credits	1.51	1.86	1.96	2.10	2.67	0	0	0	0	0
Average FOPINAR Credit Size ('000 1995 US\$)	9.9 (12.9)	13.7 (16.4)	34.3 (71.2)	54.4 (63.6)	120.2 (90.3)					
Average Number of Commercial Credits	0.9	1.4	1.7	1.5	3.3	1.2	2.3	1.9	1.4	0
Average Non-FOPINAR Loan Size ('000 1995 US\$)	3.9 (7.6)	9.4 (10.3)	16.2 (18.1)	49.0 (72.3)	254.2 (365.9)	11.3 (17.3)	8.8 (17.1)	23.8 (39.3)	585.3 (1,024.9)	--
Average Monthly Wage (worker) ('000 Sucres, 1995, incl. benefits)	362 (227)	442 (283)	468 (170)	495 (257)	658 (213)	381 (115)	441 (166)	402 (155)	497 (88)	200
% of Firms with Exports	0	0	0	0	0	0	0	10%	0	0
% of Firms with National Market	10%	72%	46%	52%	100%	5%	28%	58%	40%	100%
Material Costs/Sales (1995)	.42 (.25)	.50 (.54)	.31 (.19)	.35 (.31)	.30 (.28)	.47 (.41)	.42 (.09)	.42 (.21)	.25 (.07)	0.19
LT Debt/Total Debt (1995)	.32 (.42)	.18 (.27)	.26 (.26)	.31 (.28)	.43 (.335)	.13 (.35)	.19 (.27)	.07 (.14)	.28 (.27)	0.56
Fixed Capital (millions sucres) per worker (1995)	5.1 (5.7)	7.9 (25.4)	8.8 (9.6)	11.7 (16.6)	20.7 (26.0)	4.1 (5.4)	3.0 (3.5)	6.3 (9.8)	2.1 (1.1)	0.2

Note: Numbers in parentheses are standard deviations.

Source: Roberts, et. al., 1997.

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