

Anatomy of an Institutional Failure: Tunisia's Lending Program to SMEs

Mohamed Bechri, Tijani Najah and Jeffrey B. Nugent*

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ABSTRACT

This paper studies a case of institutional failure in a popular lending program in Tunisia. The program is a special public lending fund known as FOPRODI created in 1974 for the promotion of small and medium manufacturing enterprises (SMEs) and for the decentralization of industry. FOPRODI's announced aim was to help new entrepreneurs with insufficient capital to start their businesses and thereby to create new jobs. Because of an extremely low repayment rate, the program has failed, is unsustainable and finally collapsed in 1997. The sources of the institutional failure are traced to inappropriate incentives attributable both to the institutional structure surrounding FOPRODI and its own rules. These findings from the Tunisian experience are then used to generate policy recommendations on ways in which similar programs could be better designed and transaction costs reduced.

Key Words: Transaction Costs, Directed Credit, Small and Medium Enterprises, Tunisia, Institutions

JEL Classifications: O1, E5, L6

* The authors are respectively at the following institutions: University of Tunisia-Sousse, Institut des Hautes Etudes Commerciales (IHEC), Tunis and the University of Southern California. Najah is grateful to Tunisia's Ministry of Higher Education for financial support for his leave of absence spent at the University of Southern California in Fall, 1998 and Nugent for the financial support for his visits to Tunisia provided by the Linkage grant from the US Information Agency. All authors express their gratitude for the officials of API, banks and other organizations who provided so generously of their time in interviews.

I. INTRODUCTION

Almost twenty years after its inception, at the popular level at least, Tunisia's lending program to small and medium enterprises (SMEs), "Fonds de Promotion et de Decentralisation Industrielle" (FOPRODI), was hailed as "one of the most important measures and an original response to the Tunisian environment of the 1970s" (Marrakchi, 1991). Yet, by the early 1990s the program was found to be unsatisfactory but reformable (Ministry of Planning Commission Report, 1991). In fact, as shown below, FOPRODI has failed. It accomplished none of its basic objectives and with a loan default rate of about fifty percent, one of the highest default rates in the world on SME loan programs (Webster 1991), the program is clearly unsustainable. For these reasons, FOPRODI was terminated to be succeeded by a new FOPRODI announced in 1998.

Unfortunately, evaluations of various systems that have been created to help SMEs are much rarer than would be expected. Perhaps because of this dearth of comprehensive studies of SME support systems, there has been a significant decline in support of SMEs by international agencies (Webster, Riopelle and Chidzero, 1996). Yet, because of the growing world-wide importance of SMEs in many countries (Acs and Andretsch, 1993; Nugent, 1996; and UNIDO, 1997) and growing concern for the "missing middle" of the distribution of firms in other countries of Africa and the Middle East¹, this neglect is finally beginning to be overcome. One important source are the internal evaluations of the comparative performance of their own SME loan programs by the international agencies themselves. In part, because of its more than twenty years of experience in lending programs to SMEs in at least thirty-six countries (at a cost of several billion US dollars), the World Bank has gone further than others in assessing SME support programs like FOPRODI. In particular, Webster (1991) and Webster, Riopelle and Chidzero (1996) have come to the following important generalizations with respect to well-designed programs:

(1) The job creation benefits (measured per dollar of investment) are generally high relative to those in LEs.

(2) The loan repayment rates of such programs vary considerably across projects, countries and over time and are almost invariably a crucial determinant of their long-term sustainability.

(3) The loan repayment experience and the ability to reach SMEs with such loans are both better when they are distributed by commercial banks rather than by a single development bank and when the banks are capably staffed and well-prepared for dealing with loans to SMEs. .

¹ The "missing middle" referred to here is that between large often multinational or conglomerate firms at the top end of the distribution of firms by size and microenterprises at the bottom end.

(4) The performance of such programs generally improves over time with accumulated experience and the implementation of various program reforms.

(5) The successful programs in support of SMEs provide incentives for the use of non-subsidized interest rates, repayment and follow-up.

These characteristics, therefore constitute the standard by which FOPRODI will be evaluated. One should bear in mind, however, that some of these conclusions are too general to be of great use to policy makers charged with the decision whether or not to adopt such programs and, if so, with their design and implementation. This, of course, is a necessary limitation of such studies based on a highly summarized experience of many countries, programs and years of experience. Such studies cannot at the same time go into the detail required to identify the factors within each country's experience which best account for variations in both program effectiveness over time and the costs of improved effectiveness. This is, of course, precisely the advantage of a well-chosen case study.

In this respect, Tunisia is highly suitable for such a case study for several reasons. First and foremost, because its loan repayment rates have been among the lowest in the world. This is despite the fact that the Tunisian program has been revised over time in such a way as to take advantage of the international lessons of experience such as conducting the loan operations through commercial banks instead of development banks. Second, the failure has occurred despite both (1) repeated attempts to lower the administrative costs and (2) the creation of a heavily subsidized credit guarantee scheme (FNG) designed to encourage bank lending to SMEs. Third, the failure to reform FOPRODI would seem especially surprising given the Tunisian government's success in carrying out a number of other complementary financial reforms (Nsouli et al. 1993). Fourth, despite the fact that unemployment has been such an important problem in Tunisia and world-wide experience showing that SMEs are generally cost effective in creating employment, the cost per job created in Tunisia's program has been almost double the world average.²

Our analysis of Tunisia's FOPRODI based on in-depth interviews confirms some of the same conclusions on the factors affecting the degree of success of such lending programs to SMEs arrived at in the aforementioned cross-country studies. Yet, it also shows that: (1) the transaction costs of achieving the objectives of such programs have been excessive, suggesting the need for finding ways of reducing them, (2) the inappropriate, distorted and poorly designed incentives have contributed very substantially to these transaction costs, to loan default and to the failure to achieve program objectives, (3) the incentives have worked especially badly because of the absence of effective competition among banks

² According to Webster, Riopelle and Chidzero (1996, p. 99-100), this cost has been about \$11,000 in Tunisia compared to a world average of \$5806.

and in the face of some unfortunate moral hazard enhancing actions of government, and (4) the reforms undertaken to overcome observed program failures have been implemented excessively slowly.

The presentation is organized as follows: Section II presents the rationale for the lending programs targeted to SMEs. This will serve as an organizing framework for the remainder of the paper. Section III identifies the objectives of FOPRODI and the means established for attaining them. Section IV focuses on the high transaction costs of the program and Section V identifies other features of the program that have ultimately led to its failure. Section VI explains why reforms in the program have been so slow in coming and derives some lessons for other countries from the Tunisian experience on increasing the effectiveness of SME credit programs.

II. THE RATIONALE FOR LENDING PROGRAMS TARGETED TO SMES

There are three major bases for interventions on behalf of SMEs, namely, credit market failure, price distortions and dynamic externalities. The story of credit market failures is well-known (Stiglitz and Weiss, 1981, Hunte, 1996) especially for new and small SMEs. Inasmuch as failure rates among small and startup firms are typically high (Caves, 1998), banks suspect start-ups and SMEs asking for loans of being lemons (adverse selection) (Konig and Hoch, 1990). Due to lack of sufficient collateral, higher interest rates are the only means of compensating banks for the higher perceived probabilities of loan default. Yet, the higher the interest rate, the greater is the incentive of the firm to invest in risky projects (again adverse selection in the form of a pool of relatively high risk projects). At the same time, once the loan is granted, the higher is the interest rate, the more the borrowing firm has the incentive to default (the moral hazard problem). The result is a less than optimal supply of credit to SMEs.

The problem may be compounded by three additional factors. One of these is high transaction costs. Specifically, should (1) the SMEs not possess the appropriate accounting procedures for use in their loan applications, (2) the costs incurred by banks to verify information provided them by firms be high, or (3) the program itself impose cumbersome procedures, the transaction costs of the loan may become so high relative to the small size of the loan as to make the loan unprofitable, no matter how high the interest rate. Second, with insufficient competition among banks, the banks may be able to survive and prosper without trying to develop a new class of clients like SMEs, even if it should be profitable to do so. Third, an institutional environment of lenient bankruptcy laws making it difficult for banks to collect on loan collateral or in which governments have forgiven previous program loans can further lower the incentives for loan provision and repayment.

The price distortion argument typically arises from imperfections in the labor and/or capital market. If wage rates are higher than those that would equilibrate the labor market,³ there will be open unemployment and the social accounting price of labor will be below the market price. If so, the social benefits of employment creation by SMEs (which are generally more labor intensive than large firms) would exceed the private benefits.⁴ Likewise, even if wage rates themselves were not artificially high but capital costs were artificially low (e.g., because of interest rate subsidies or underpriced foreign exchange and hence subsidized imported capital goods), intervention in support of labor intensive, capital saving SMEs might be justified.

The dynamic externalities basis for intervention derives from the fact that new firms, which are inevitably also small to begin with, also bring with them new ideas and new techniques, which both can eventually be imitated by other firms and indeed may induce or force other firms to be more efficient. The entry of new SMEs may increase overall learning and flexibility, i.e., greater adaptability to changing circumstances. Because of their smaller size and perhaps lesser ability to obtain patents and protect their ideas from imitation by others, SMEs are less able to internalize the benefits of their new ideas, innovations and perhaps even R&D, than larger firms, causing more of the benefits thereof to leak out as externalities to other firms. This undermines the incentives for SMEs to do so and of entrepreneurs to establish SMEs. Naturally, the likelihood of such dynamic benefits depends on the industry and its various characteristics. In industries where there is little technical change or new product activity, the expected social value of a new entrant and its new ideas may be small. Also, in the absence of economies of scale, there would be little reason for believing small startups to be disadvantaged. In industries with greater room for new products and process innovation and also economies of scale, however, the greater will be both the social value of a new entrant and the social cost of the small firm's inability to take advantage of larger scale. These problems are further compounded when (quite realistically) the value of the new idea, product or innovation is uncertain, and there are asymmetries in information between the possessor of the idea (the entrepreneur) and the manager of an existing firm in which the entrepreneur originally works and/or the creditor.⁵

None of these arguments, however, is universally applicable inasmuch as there may exist institutional or other means of getting around the problems justifying intervention. For example, in the

³ There are many possible explanations for this, ranging from unions and government regulations to efficiency wage considerations.

⁴ Since labor cannot be used as collateral, the greater labor intensity (lower capital-intensity) of SMEs implies that they will optimally have less to offer in the way of collateral than large firms.

⁵ It is such arguments that are used to justify support for technology startups (Audretsch, 1999).

presence of long-term relationships between firms and banks or employers and workers, both the transaction costs of obtaining the relevant information and the asymmetries in such information may be greatly reduced, thereby greatly reducing both the adverse selection and moral hazard problems.⁶ In the case of externalities, it may be much better to overcome the basis of the externalities, e.g., by developing more complete property rights. Likewise, in the case of factor price distortions, it may be better to adopt more appropriate trade and regulation policies than to subsidize SMEs in one way or another. Finally, even if, because of political or other constraints, SME lending programs should turn out to be the optimal (second best) means of dealing with these problems, the benefits need not outweigh the costs of these programs.

Given the importance of industry characteristics and the institutional environment, both should be considered in evaluating the appropriateness of such arguments for intervention.

III. ORIGIN AND EVOLUTION OF FOPRODI

As mentioned above, FOPRODI was created in 1974 with three important objectives: (1) to increase entrepreneurship by promoting new entrepreneurs in SMEs (defined as firms with capital of up to one million Tunisian dinars)⁷, (2) to help decentralize manufacturing activities in a country in which these activities had been highly concentrated in the coastal region in general and its three principal cities (Tunis, Sfax and Sousse) in particular, (3) to lower the country's persistently high official unemployment rate (of about 16%). Each of these objectives is identified in a separate row of Table 1. The incentives offered for each objective and the results obtained are given in the subsequent column entries in the table. Even this simple table allows us to draw several important conclusions about FOPRODI. First, as shown in the last column of the table, there was substantial failure on each of its objectives, ranging from 50% to 100%.

Second, as indicated in the three preceding columns of Table 1, the program is a highly subsidized one. An entrepreneur who is eligible for FOPRODI support could benefit from a long-term loan at start-up for up to 70% of the initial capital of the firm, a share vastly outweighing the entrepreneur's own contribution which could be as small as 10% of the initial capital.⁸ The loan for start-

⁶ For example, Correa and Correa (1997) point to the advantages of universal banks characteristic of Germany and Japan as means of overcoming these problems. These banks typically have long term relations with their borrowing clients and can mix debt and equity contracts to provide better incentives.

⁷ Prior to 1988 this amount was 500,000 Tunisian dinars. A dinar has generally been worth a little more than one U.S. dollar.

⁸ The 70% maximum applied to firms with assets below 500,000 Tunisian dinars. For firms above that amount but below one million Tunisian dinars, the upper bound on the loan was 20% of total assets.

up capital, moreover, does not need to be paid off before 12 years, with a highly favorable five-year grace period and a nominal interest rate of only 3% per annum (in the face of an inflation rate that averaged 7 percent over the period under study). A small (first tranche) FOPRODI-supported entrepreneur could also receive a medium-term loan (for ten years) and a grace period of three years at an interest rate of 5% if his firm is located in a "remote area" or at one of 7.5% if located elsewhere.⁹ Also, any remaining gap in finance can be financed by bank credit at an interest rate of only 3% above the open market rate. FOPRODI projects could also benefit from other special treatment such as allowing payments to social security (for the first five years) and all training expenses to be tax-deductible. Moreover, as indicated by the entries under "Capital Incentives", these interest rate and capital subsidies could be supplemented by public spending on infrastructure, especially for SMEs located in remote areas. Table 2, however, shows that, as of 1990 at least, the interest rate and capital subsidies were far more important than the infrastructure subsidies.

Third, as pointed out in footnotes 8 and 9, the benefits relative to costs of FOPRODI are highly skewed toward the (smallest) first tranche¹⁰ firms. Moreover, although beginning in 1993 medium-term FOPRODI loans were discontinued, a FOPRODI-supported entrepreneur of a project under 300,000 Tunisian dinars could still benefit from an investment premium of 6% of the total capital at start-up as well as a direct subsidy of 1% of start-up capital for the feasibility study.

An important characteristic of both FOPRODI itself and the Tunisian environment within which it operates not revealed in these tables is the dominant role of publicly owned commercial banks in the banking and financial intermediation system. This is important because, from its inception, the management of FOPRODI has been delegated to those commercial banks (and one large development bank) which have signed FOPRODI conventions with the Finance Ministry. In 1978, of the six banks participating in this program only one was private (BIAT). Although the number of participating banks increased to ten in 1993 (according to Law 93-120 of December 1993),¹¹ public sector banks remain dominant in the management of FOPRODI. The lack of interest in the program by private banks can be explained, among other things, by their high share (over 30%) of the risk in the credit guarantee scheme (discussed further in Section V below). Banks participating in the FOPRODI program are supposed to make a first screening of the proposals received and forward the selected ones within 45 days to the "Agence de Promotion de l'Industrie" (API). Another disincentive to private banks is that the commission

⁹ Until 1993, moreover, a second tranche SME could have the first six months of interest payments on a medium-term loan paid by the government.

¹⁰ The first tranche SMEs are those with assets of up to 150,000 Tunisian dinars (75,000 prior to 1988).

¹¹ The banks which signed the convention are known as STB, BNA, BIAT, BET, BS, UIB, UBCI, BH, BT and Amen Bank.

they receive for bearing the risk and the transaction costs of FOPRODI - 1% of the amount of the loan plus an amount which varies in proportion to the reimbursements made (and that occur only much later) - is clearly inadequate inasmuch as it is less than both what banks get on almost all other types of loans and the bank spreads observed in the World Bank's study (4% when interest rates are subsidized and 6-9% when interest rates are set by banks).

The results of a comprehensive survey of the manufacturing sector in Tunisia in 1990-91 conducted by the aforementioned API are summarized in Table 3. The results show clearly the importance of small firms in the formal industrial structure of Tunisia. In particular, almost 70% of all registered manufacturing enterprises had less than 50,000 Tunisian dinars of capital (putting them well within the small Tranche 1 firms favored by FOPRODI). More than 60% of such enterprises had fewer than 20 employees. Virtually the same high percentage of enterprises had been in existence for less than 5 years. By no means do we suggest that this skewness in the size distribution of SMEs to very small and new firms is entirely attributable to favoritism for such firms in FOPRODI provisions, but it would certainly seem to have been a factor. Our contention is that any such tilting of the size distribution of Tunisian manufacturing toward small firms was achieved at high (unnecessarily high) transaction costs.

IV. THE HIGH TRANSACTION COSTS OF FOPRODI

As explained above, credit markets are especially vulnerable to the two important consequences of asymmetric information, namely, adverse selection¹² and moral hazard¹³. Since simply charging a higher interest rate to reflect a higher risk premium may further aggravate the problem by increasing the borrower's incentive for default, collateral requirements that overcome this disincentive can actually mitigate the market failure problem.

Yet, it is clear that Tunisia's FOPRODI was intended to operate, in principle, without collateral. In view of the high degree of uncertainty concerning the outcome of SME projects, related informational asymmetries, the lack of experience and perhaps also knowledge of accounting procedures by start-up entrepreneurs, it is also clear that Tunisian banks face high information costs in trying to properly assess credit-worthiness of potential SME borrowers (Lianto, 1990; Stiglitz, 1993).

¹² Adverse selection can occur in several ways. First, it occurs when potential demanders of credit choose to deliberately mislead the supplier of credit by falsely posing as a good risk while, in fact, being a bad one. Second, at any given interest rate (reflecting a pre-announced risk premium), firms with actual risk premia above the pre-set level will be specially anxious to apply for loans.

¹³ Moral hazard occurs after the loan is made by virtue of the fact that the borrowing firm, once it has the loan may have greater incentive to invest in risky but high-yielding projects.

While as is well recognized in the literature (Stiglitz and Weiss, 1981)¹⁴, to avoid the adverse selection and moral hazard problems arising from high interest rates, banks themselves may want to impose ceilings on lending rates, this doesn't mean that subsidized interest rates will help. Indeed, in the absence of satisfactory collateral, all artificially low interest rates can do is to increase the excess demand for subsidized credit.

A first best solution is obviously to correct these various sources of market failure is to remove the basis of such problems, rather than only treating the symptoms or even worse compensating for the damage done. This can justify programs to encourage SME entrepreneurs to keep accurate books using standard accounting methods and/or efforts to take advantage of community-level information on credit-worthiness and character. In rural areas and agricultural settings wherein everyone knows a lot about other members of the village and their farms, this can justify the construction of peer-group monitoring and mutual guarantees. Unfortunately, however, the peer-group approach is much less applicable to small manufacturing businesses, especially those in urban areas. In such situations, people know each other less well and entrepreneurs have much less incentive to share their business ideas with others. Another low transaction cost solution that has been put to good use in microenterprise finance is to lend in tiny amounts at first (with very little monitoring) on the promise that, (only) with reliable and timely repayment of mini loans, can one qualify for larger and larger loans later on. Yet, once again this approach is again much less applicable to SME startups and expansions.

As a second-best, Virmani (1982) suggested lump-sum subsidies to banks to compensate them for the initial informational investments, and others have suggested subsidies to the formation of credit bureaus. On the grounds that the workers have the best information about the quality of SME managers and are the most oppressed, Pradhan (1989) recommends that the subsidies and loans should be channeled to the SMEs by way of the workers. In the case of FOPRODI, however, the borrowers are the beneficiaries of the subsidy, thereby creating an incentive for rent-seeking activities, fraud, embezzlement and waste. Whereas in principle it might have been supposed that the credit guarantee fund (FNG) would serve as the credit bureau, in the Tunisian case this has not occurred; it is still only the banks that assess the credit-worthiness of their clients. Moreover, the banks have not had a sufficient incentive either to undertake sufficient screening and monitoring of their loans or to share their information with the bureau or other banks.

According to the results of a 1992 survey, the lack of satisfactory collateral remains a major reason for denial of an application by the bank. Hence, even though FOPRODI was designed to satisfy

¹⁴ Prior to this it had been believed that the only plausible explanation for interest rate ceilings was central bank and governmental regulations designed to repress the allocation of credit to private borrowers in order to facilitate

the credit needs of SMEs with little or no collateral, given the aforementioned insufficient inducement for banks to participate without it, in fact banks insist on collateral, even for FOPRODI loans. Yet, even when a firm can offer collateral, e.g., in the form of the equipment to be purchased,¹⁵ its usefulness as collateral to a bank is reduced if the equipment is sufficiently specialized that there is no ready market for it. While this is not problematic in the case of hotels (tourism being highly developed in the country and hotels rather generic), it is a major problem for manufacturing SMEs in all but a few subsectors like bakeries, food processing and textiles that are already rather saturated. As a consequence, banks are reluctant to accept even machinery as collateral, as was repeatedly reported to us by bankers.¹⁶

Since asset specificity reduces the suitability of SME machinery as collateral (Williamson, 1975, 1985, banks loan approvals tend to be biased towards traditional activities with well known technology and against product-diversifying activities with new technology. Indeed, as indicated in Table 4 below, the shares of some sectors in which asset-specificity would be less of a problem, such as Agriculture and Food Processing (24.2%), Mechanical and Electrical Industries (23.4%), and Textile and Leather (18.2%), in FOPRODI projects are almost four times the shares of these sectors in total national investment. Indeed, in our interviews with them, bank executives repeatedly explained this bias in terms of the better prospects for marketing such assets in case of liquidation.¹⁷

Our interviews with banks also made it clear that the costs of monitoring and loan repayment become much higher (often prohibitively high) for banks when the applicants and their actual or proposed operations are located in remote areas. As a result, banks typically establish a rule against financing projects located in areas where they have no branches. While detailed data by region and community are unavailable, even the allocation data for the five very broadly defined regions in the right hand side of Table 4 suggest that most FOPRODI projects and most of the employment generated by them are located in the already well developed regions (especially the North-East and Center East). Only about 15% of the employment generated by FOPRODI projects is located in the three most economically underdeveloped regions, i.e., the North-West, Center-West, and South-West).

Given this background on the institutional setting and the results of our qualitative interviews with participating banks, and because of our view that high transaction costs are of primary importance in explaining the failure of FOPRODI, we now proceed to assessing the magnitude of the transactions costs

borrowing by the public sector (McKinnon, 1973; Shaw, 1973).

¹⁵ Because of the underdeveloped nature of Tunisia's capital goods industry, usually such equipment is imported from abroad.

¹⁶ Indeed, according to the only available evidence with respect to FOPRODI projects that failed to get bank approval in 1990, thirty percent have been rejected for insufficient collateral.

¹⁷ While it might have been desirable to corroborate this explanation by analyzing the sectoral composition and technological characteristics of rejected proposals, none of the banks was willing to disclose such information.

involved in each of the following four stages of the application approval process. In step I the application is appraised by a participating bank. In step II, the project is sent to API for approval. In step III, the project is returned to the bank for it to sign a contract with the firm and to obtain the funds from the central bank. Finally, in step IV the necessary equipment is obtained, the plant is set up and eventually production commences.

To serve as a rough guide as to the relative magnitude of the costs involved in each stage, in Table 5 we present estimates of the processing time and the approval or success rates for each of the four steps of the process.

Step I: Screening by Banks

As shown in Table 5, the screening of a FOPRODI project by the participating bank, on average, takes 80 days, almost double the maximum approved time set for FOPRODI projects in its statutes. During this time, the bank's head office typically makes a series of inquiries to its various branches about the credit history (if any) of the borrower and on the basis of information gathered makes an assessment of the reputation, morality and credit-worthiness of the borrower. Although they engage in extensive character investigations of potential borrowers, the banks are reluctant to undertake detailed economic appraisals of the proposed projects. This they consider too costly relative to its value in the overall assessment. The incentive for this type of investigation is further reduced by the weak incentives provided by aforementioned commission structure: 1% of the value of the long-term loan plus an additional 3% of the subsequent repayment payable at that date (perhaps 12-15 years later). Presumably to compensate them for delays in disbursement, the banks also receive from their FOPRODI clients a commission of 0.05% for those loans not yet disbursed. Naturally, this encourages the borrowing firms to withdraw all the approved funds immediately rather than only when needed or after the earlier stages of the project's development are completed successfully, thereby contributing to the unnecessarily high default rate on FOPRODI loans.

A study undertaken in the early 1980s by one of the few private banks participating in the FOPRODI program (BIAT) to assess the costs of its FOPRODI loans identified 16 steps within this first application processing stage, a process taking some three months. The fact that according to column 2 of Table 5 bank screening was still taking an average of 80 days as late as 1990, proves that no substantial progress has been made since the time of the BIAT study. Another factor adding significantly to the transaction costs in Step I is the high failure rate of applications, 35% (i.e., 100% - the success rate of 64.8%) as indicated in column 3 of Table 5. Even a cursory calculation of the costs involved in an eighty day investigation involving personnel of the bank and its branches would seem to suggest it unlikely that the benefits of the extra monitoring could outweigh the costs. The reluctance to engage in economic

evaluations of the projects (as opposed to persons) also stems from the fact that such evaluations would require more specialized personnel from outside the banks themselves, implying still higher marginal transaction costs.

Step II: The API Approval

As mentioned above, once the project applications have been approved by the participating bank, they are transferred to API in order to be eligible for preferential treatment in terms of investment premium, interest rates, and duties on imported equipment. API's decision is to be taken at a meeting of its Central Committee within a month. As shown in column 3 of Table 5, a full 15% of bank-approved projects was denied by API, contributing further to high transaction costs per successful project.

Once API's approval has been granted, the entrepreneur has to prepare the firm's legal status. Earlier, this step could be quite time-consuming and could involve contracting for legal services. The creation of the "one stop shop" in September 1989, however, substantially reduced the required time to about ten days.

Step III. The Settlement of Funds

This step corresponds to the signing of the contract and settlement of funds. The entrepreneur has to go back to the bank in order to prepare the contract and satisfy all the legal requirements of the contract including the collateral. Once the contract is signed, and after an on-site visit to the plant, the bank asks for funds from Tunisia's Central Bank. As shown in Table 5, only 87% of the projects with the final API approval succeed in getting through this final stage. This is because, even with API approval already secured, approved firms may find it difficult to satisfy the banks' collateral requirements. As a result, Step III can take up to six months to complete.

Step IV. Machinery Import and Production Start-up

With the settlement of funds by banks, the entrepreneur should be in a position to import the needed machinery and other inputs and to start production. This would seem to be an easy task since no prior authorization is needed from the Central Bank. In practice, however, the import of foreign equipment constitutes yet another headache for FOPRODI applicants who are required to import new machinery as opposed to used machinery (for which the price or value may be very difficult to assess).¹⁸ To fully document the value of new machinery may also require time and effort such as obtaining the necessary catalogues and other documentation of price. This step may be especially difficult and onerous in cases in which the imported machinery also serves as collateral and so can take up to six months.

¹⁸ Unfortunately, this regulation can put such firms at a disadvantage relative to non-FOPRODI firms both inside and outside Tunisia that may be able to get more appropriate and more inexpensive equipment by acquiring second hand equipment.

Despite the lengthy period for trying to resolve the collateral and other problems between the bank and the firm, as shown in column 3 of Table 5 more than 10% of the projects approved by both the bank and API and for which FOPRODI funds were made available still fail to materialize. Besides the aforementioned problem of documenting the value of imported equipment, most FOPRODI projects are impeded and some ultimately fail because of insufficient working capital.¹⁹

Overall Evaluation

Since repayment is vital to success and sustainability of the FOPRODI program, the transaction costs do not end with the commencement of production. Indeed, especially considering the lengthy grace period and repayment period provided for in FOPRODI projects, the transaction costs incurred by the banks can continue for a decade or more after the completion of Step IV. Because of the aforementioned moral hazard problem involved in credit contracts not fully backed by fully marketable collateral, these ex-post transaction costs can be extremely important.

Since successful FOPRODI applicants can be eligible to borrow at interest rates, and to import at tariff rates, that are well below those available to other firms, applicants to FOPRODI may have an incentive to misrepresent themselves. For example, it may induce large firms to pose as small ones because it is only entrepreneurs of the first tranche of investment who were eligible for loans (both long-term and medium-term) from FOPRODI. As shown in Table 6, 70% of FOPRODI projects during the period 1987-1990 were concentrated in this first tranche. For the same reasons, fraud and embezzlement of funds are believed to have occurred in FOPRODI projects. If a FOPRODI entrepreneur can get a much lower interest rate than he could to purchase a car, house or land parcel, he may have an incentive to allocate some of the FOPRODI funds for purchase of such personal use items rather than for their declared use. Yet, again because of information asymmetries, lenders find it prohibitively expensive to monitor the use of funds in any degree of detail and typically do not do so.

Any legitimate cost-benefit analysis of FOPRODI would require an assessment of the social benefits of projects supported by FOPRODI, something that is well beyond the scope of this study. Yet, from API data, some doubts about large social benefits seem warranted. Of the 929 FOPRODI projects during the 1976-1990 which actually reached the production stage, in 1992, 48 were bankrupt, 325 were facing severe hardships, and only the remaining 556 were considered to be operating successfully. Even among the latter, the realized number of jobs was much smaller than the number anticipated in the loan proposals. Another factor contributing to the disappointing job-creating benefits of FOPRODI projects is the aforementioned bias among such projects to the smallest (first tranche) ones as shown in Table 6.

¹⁹ To mitigate this problem, in 1987 the Central Bank included in the medium-term credit a specific amount for working capital equal to 10% of the total amount of investment.

Although these projects constituted 70% of the FOPRODI total and received more incentives per unit of investment than those in the second and third tranches, they contributed only 38.5% of all jobs created by FOPRODI projects.

The social cost of the transaction costs attributable to the lengthy procedures to complete the four steps identified above takes two very different forms: (1) the cost to the firms themselves for the slow pace of the procedures and (2) the opportunity cost of the resources used in monitoring. Relative to (1), API estimates that the average delay beyond that anticipated by the entrepreneur added about 30% to total cost of a sample of projects starting production between 1987 and 1990 and contributed very substantially to the high failure rate of FOPRODI projects. Conservatively assuming that (1) the average time for a FOPRODI project to reach the production stage was 15 months,²⁰ and (2) the prospects of such projects were sufficiently bright to encourage additional demand for FOPRODI projects, had the length of time to complete the process been reduced by a modest 20% (i.e., to twelve months), we estimate that over the course of FOPRODI's existence the number of FOPRODI projects evaluated, approved and put into production could have been increased by 78 projects and well over one thousand jobs.

V. THE FAILURE OF FOPRODI AND ITS EXPLANATION

As shown in Table 1 above, FOPRODI has experienced substantial failure (50% or more) in achieving any of its objectives. As mentioned above, while entrepreneurs have started new businesses, many of them have never commenced production and those which succeeded in this respect have generated extremely little employment growth over time and absolutely no decentralization of economic activity. Since most activities of the FOPRODI have been crowded into already well developed, relatively low risk activities like bakeries, textiles and footwear it would seem doubtful indeed that the entrepreneurship objective has been well-served. Likewise, since they have been in the same already well developed regions of the country, it is even clearer that the decentralization objective has not been met. Moreover, since the activities have been largely concentrated in sectors with low rates of product or process innovation and technological change, it is clear that the dynamic externalities justification for intervention on behalf of SMEs has not been justified. Due to the fact that FOPRODI has involved highly subsidized interest rates and had a surprisingly low rate of employment generation, it is clear that government intervention in support of SMEs through FOPRODI can also not be justified on the basis of

²⁰ While such an estimate was only slightly below the actual average for the 1987-1990 period after various reforms had been undertaken to stream-line the procedures, it would certainly be far below the average for the entire history of FOPRODI projects.

relative factor price distortions and the social benefits of employment creation. Finally, and perhaps most importantly, the aforementioned extremely low repayment record of FOPRODI firms is another important sign of failure. According to Webster (1991), the repayment rate needs to be about 90% for such a program to be sustainable. Yet, as shown in Table 7, the repayment rate on FOPRODI loans averaged only slightly above 47% during the period 1976-86, 51.4% during the period 1987-90, and 56% in 1991-97. Indeed, it remains very low compared to the world-wide average of 82% reported by Webster, Riopelle and Chidzero (1996, p. 104).

One important reason for the failure in all dimensions was the failure to link incentives with objectives. Although the incentives for qualifying SMEs were shown in Section III to be extremely generous, absolutely no incentives were provided for employment generation and only a minor investment premium and small subsidy for feasibility studies were given for industrial decentralization.²¹ Hence, the failure to link the incentives to any of the objectives was an important source of failure. Moreover, none of these incentives has been linked to the achievement of specific targets, such as the creation of X number of jobs within three years.

Second, there was a glaring lack of both a feedback scheme from the objectives to incentives designed to achieve them and a mechanism for stream-lining the program. Without such a feedback scheme, several incentives were assigned to the same objective and some objectives were left with no specific incentive.

Third, the incentives themselves were distorted, providing the seeds of failure. One example of a distorting incentive arise from the scheme's intent of providing loans without much collateral, but thereby undermining the understandable desire on the part of banks to reduce the incentive for loan default by requiring collateral. Even though as mentioned above, the highly subsidized loan guarantee program (FNG) was not effective, its very existence exacerbated moral hazard behavior on the part of FOPRODI firms in the form of loan default and undermined the interest of banks in following up on their SME loans and encouraging repayment. The high transaction costs, the high risk of default and delayed compensation of the scheme, moreover, discouraged banks from participating in the FOPRODI program.

Another distorted incentive lies in the fact that the benefits of FOPRODI are lopsidedly in favor of the smallest (first tranche) firms which are low in employment generation and provided insufficient incentives for growth and risk-taking. Moreover, the fact that the ceilings for the various tranches remained fixed for more than ten years in the face of substantial increases in capital and other costs have increased transaction costs very substantially by forcing many FOPRODI firms to reapply to cover the

²¹ While there are some other incentives for industrial deconcentration away from the coastal area, these are not limited to FOPRODI projects.

above-ceiling costs.²² The fact that these incentives are largely confined to start-up firms and take the form of such highly subsidized interest rates (generally negative in real terms) provided an incentive for rent-seeking behavior. The presence of rent-seeking behavior led to even higher transaction costs in screening, processing and disbursement of FOPRODI loans. As summarized by Malhotra (1996), there is little evidence that subsidized interest rates have a substantial effect on the demand for productive investments and considerable evidence that they decrease the efficiency of such investments.

Fourth, it is clear that interest rate incentives have constituted the backbone of the FOPRODI program and mandatory credit allocations a major reason for banks to participate. Not surprisingly, the closing of the Central Bank's discount window to banks and the consequent abolition of the ratio of high priority activities in 1996 that resulted from the country's commitment to financial liberalization have led a dramatic decline in the number of FOPRODI projects (to only five in 1997).

Fifth, it is our contention that, aside from the aforementioned high transaction costs, the failure of FOPRODI in achieving sustainability was mainly due to: (1) the heavy subsidy, (2) the lack of competition among banks and the predominant role of publicly-owned banks, (3) the ill-conceived and completely ineffective guarantee scheme (FNG), (4) the absence of follow-up by the banks of the firms to which FOPRODI loans have been extended, and (5) certain actions taken by the government in 1990 which encouraged moral hazard and adverse selection on the part of FOPRODI borrowers. Each of these will be explained briefly.

(1) The Heavy Subsidy

In the case of FOPRODI at least, the heavy subsidy may even have encouraged default by giving borrowers from the start an impression that FOPRODI is essentially a Government give-away program. With the passage of time this negative attitude was strengthened as more and more borrowers came to realize that they can default at practically no cost. With a contribution as small as 10% of the total capital thanks to a long-term FOPRODI loan, the entrepreneur has a minimal stake and, as a consequence, has little incentive to invest in low risk-high quality projects and in maintaining the assets. A higher stake, to the contrary, would signal to lenders the confidence of project owners in their future prospects. This has contributed to the high rate of bankruptcies and the ultimate failure of the program as a whole.

(2) The Predominant Role of State-owned Banks and the Lack of Competition

To a large extent, FOPRODI was managed by state-owned banks. Since these publicly owned banks may have other objectives such as maintaining economic prosperity, providing loans to well-connected clients, and promoting political stability, quite naturally they may have had less than complete interest in profit maximization and in pursuing borrowers for loan repayment. Even the private banks that

²² During the period 1987-1990 more than 10% of the projects had to go over these limits.

were involved were heavily regulated by the Central Bank. Despite having several commercial banks involved, in practice the Tunisian system for disbursing SME loans was little different from the "single development bank" type referred to in Webster (1991). This type of disbursement of SME loans was shown to be the least effective of all the systems used. In any case, in the absence of strong competition among banks, the banks had little incentive to develop long-standing relations with SMEs as a means of enlarging their clientele. As a result, the only incentive for them to participate in FOPRODI was to avoid the 7% penalties meted out for failing to meet the mandatory credit allocations to agriculture, SMEs and exporters.

(3) A Poorly Designed and Ineffective Credit Guarantee Scheme

It was precisely to encourage bank participation in SME financing under FOPRODI that Tunisia's Credit Guarantee System "Fonds National de Garantie" (or FNG) was created in 1981. Although until 1993 its secretariat was located within the central bank and subsequently in a state-supported re-insurance company (Tunis-Ré) which assured it of high quality staff and good facilities, FNG has been completely ineffective, at least as far as SMEs in the manufacturing sector are concerned. Before 1991, the risk of FOPRODI loan default was shared between the participating banks (25%) and FNG (75%).²³ FNG received its funds from a flat rate charge of 1% of all FOPRODI-supported loans. Compared to the conditions identified by Levitsky and Prasad (1990) as requirements of a successful credit guarantee scheme, it is clear that Tunisia's FNG is quite deficient. (1) Instead of insisting that the lending institutions participating in the scheme should be private so that losses would not be covered by access to subsidized credit from the Central Bank, most of the banks (and all the larger ones) participating in Tunisia's scheme are public. (2) While originally the share of the lending institution in the risk of non-payment by the borrower was in the desired range of 20% to 30%, it was subsequently increased to 33%, implying that Tunisian banks are insufficiently interested in participating in lending backed by the guarantees. (3) Instead of assuring viability of the fund without government subsidy by charging borrowers annual fees of 1%-2% on top of a more modest "front-end" fee of 1%-2% of the value of the loan, FNG's fees are only 5/8 of one percent on long-term loans or 5/16 of one percent on short-term loans plus a one time contribution of firms eligible to FNG guarantee of 1/8 of one percent of the loan. (4) Instead of the banks being given adequate incentives to maximize loan repayment by their clients and a standard means of identifying arrears and a relatively short and clear-cut maximum period of arrears before the banks are compensated by the fund for these arrears as in the Levitsky and Prasad requirement, in the case of FNG the incentives given to banks for obtaining repayment are extremely weak and banks must wait at least two years before a move for compensation can be initiated. Even

²³ After the reforms of 1993, the banks' share was increased slightly to 33% and that of FNG decreased to 67%.

worse, the participating bank has to prove that it took all the necessary measures to recover its loan.²⁴ By failing to meet its commitments in a timely manner, FNG has lost whatever credibility it may have had at the start.

(4) The Lack of Bank Follow-up of FOPRODI Loans

Since its inception in 1974, the frequency, nature, mechanisms and responsibilities for bank follow-up of FOPRODI loans have never been specified. This has contributed to a situation where the banks visit FOPRODI firms only at the time of disbursement of the loan for start-up or when the firm fails to repay. Without any specific requirement by the central bank for follow-up, the banks have insufficient incentives to accomplish such follow-up and as a result act passively, doing nothing to prevent project failure and instead merely waiting for failure to occur. As mentioned above, the main incentive for banks to participate in FOPRODI projects is the mandatory minimum credit allocations imposed by the Central Bank.²⁵ Even so, however, because the penalty for failing to meet these mandatory allocations is insufficient, some banks may well find it in their interest to pay the fines for failing to comply rather than to meet the regulation by lending to SMEs with all the attendant risk of loan default. Moreover, because the penalty rates to firms for arrears on FOPRODI loans are only 7% for long-term loans, and 10.25% on medium-term loans, firms have preferred to accumulate arrears on these loans in favor of paying off their short-term loans at commercial rates.

(5) Moral Hazard Resulting from Government Actions of 1990

When in 1990 the government took the initiative to bail out the banks by consolidating the bad debt of some ninety-nine firms, from then on the banks had even less incentive to force repayment than they had before. Likewise, seeing the bailout of the banks for their delinquent loans, the firms felt less obliged to meet their repayment obligations.

VI. THE SLOWNESS OF REFORM, CONCLUSIONS AND LESSONS

Mere ignorance may explain any defects in the conception of FOPRODI at its inception in the early 1970s, especially because the country had no previous experience in such matters. Nevertheless, with the passage of time, knowledge of the experience elsewhere and of existing defects in the system built up. As a result, reforms could have, and should have, been introduced to improve the system, but they weren't. Why have the authorities, i.e., the Ministry of Finance and the Central Bank, allowed FNG

²⁴ For example, BIAT has been attempting to prove that for several years, but has yet to have its claim paid. The other (public) banks have not been aggressive in having their claims satisfied.

²⁵ This ratio was called "ratio of high priority activities" which included SMEs, agriculture and exports. This requirement was eliminated in 1996.

to remain ineffective for so long? As is clear from the data of Table 7, default was high (around 50%) not only on long-term start-up loans but also on medium-term credit.

One reason is that the FNG secretariat was tiny, an extremely small unit located within the Central Bank. As such, it has been unable to appropriately appraise the claims coming from banks. Hence, FNG's role became limited to receiving bank claims. It really had no way of investigating the validity of these claims. Technical and organizational weaknesses, however, were not the only reasons for failure. API (1992) attributed much of the paralysis of FNG to the fact that applications were to be screened by a commission headed by the Minister of Finance. For unspecified reasons that commission was repeatedly unable to meet. Only in 1994 was FNG management delegated to a re-insurance company Tunis Ré. The Ministry of Finance, of course, had an interest in maintaining confidence in the banking system and did not want to give official recognition to the existence of bad loans. Moreover, since FNG was not self-supportable from the commissions charged to borrowers, ignoring the requests for compensation also greatly eased the government's own budgetary problems.

Given the ineffectiveness of FNG, the only alternative left to banks was to appeal to courts in case of default. This, however, turned out to be both costly and slow, since bankruptcy cases could take up to 7-11 years for settlement (World Bank, 1995). Hence, ineffective bankruptcy laws contributed further to the malfunctioning of the system. Furthermore, as noted above, high default rates were observed in the FOPRODI program as early as the 1970s. The lack of action can in part be explained by the fact that there had already been precedents in agriculture and other sectors of non-performing loans taken over from the participating bank by the FNG. Hence, non-performing loans may have come to be taken as the normal state of affairs. Given the dominance of public sector commercial banks, the banks with access to low-cost central bank discount window for much of this period had little incentive to press for reform. In this respect, the Tunisian experience shows the hopelessness of loan programs to SMEs implemented by an inefficient public sector-dominated banking system and in the absence of an effective credit guarantee system.

Finally, private firms also had little incentive to press for change. As long as the FOPRODI window remained open for cheap credit to firms which otherwise might not get it and with extremely light penalties for default, SMEs could hardly be expected to campaign for major reforms or termination of the program. Given the lack of effective competition that FOPRODI supported SMEs provided for larger firms, LEs hardly had much to fear and indeed, if they wanted to, they could spin off new ventures which might themselves qualify for FOPRODI. In fact, the only pressure for reform would come from international organizations and governmental technocrats.

By demonstrating the several different dimensions in which Tunisia's FOPRODI failed despite the alleged justification for interventions on behalf of SMEs, the present study suggests that governments and their citizens be more cautious in jumping into such programs. Moreover, by tracing FOPRODI's failure to poorly designed incentives, unacceptably high transaction costs for borrowers and lenders alike, an ineffective guarantee scheme, an insufficiently competitive and excessively public sector dominated banking system, and the lack of adequate follow-up by banks of FOPRODI loans channeled through them, the study also identifies a variety of things that should be done very differently if Tunisia is to do any better with its proposed new FOPRODI program. A radical reform of the financial sector including the FNG and FOPRODI is necessary if Tunisian SMEs are to be able to succeed. Such a reform is especially critical now because of the country's commitment to open the country's markets to international competition beginning in 2001 as part of its agreements with the European Union.

While every country has inherited somewhat different historical background and institutional conditions, Tunisia's background, experience and institutional conditions are surprisingly similar to a wide variety of other relatively small developing, middle income and transition economies. For this reason, many of the lessons of Tunisia's experience with FOPRODI may prove applicable to other countries. Indeed, given the dearth of in-depth studies of institutional failures, the applicability of the Tunisian experience to other cases should be given serious consideration.

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Table 1

Objectives and Incentive Structure of FOPRODI^a

Incentives: Objectives	Capital Incentives	Interest Rate Subsidies and Investment Premiums	Fiscal Incentives	Results
Promote New Entrepreneurs	Long-term loans Medium-term Loans for first tranche firms Infrastructure for industrial zones	Highly Subsidized, First 6 Months Interest Payments on medium term loans paid by government 6% of Assets as Grant for Investment 1% for Project Studies	Exemption from Social Security for the first five years Training Expenditures Tax Deductible	50% Failure
Promote Industrial Decentralization ^b	No special incentives	More Highly Subsidized	No special incentives ^c	100% Failure
Promote Employment	No Special Incentives	No Special Incentives	No Special Incentives	Virtually 100% Failure

^a The Incentives are those specified in Articles 44-46 of the Investment Law of 1993,

^b This objective was renamed as “Regional Development” in 1993.

^c While there are other incentives, none of these is specific to FOPRODI (Article 23-26 of the 1993 Investment Law).

^d It is paradoxical that the only incentive linked to job creation was eliminated from the Investment Law 87-51 of 1987.

Table 2
Subsidies for FOPRODI Projects, as of December 1990

	Interest on Loans		Infrastructure	Total
	Medium-term	Long-term		
Value (Millions of Tunisian dinars)	24.1	9.9	3.2	37.2
In % of Total Value	65.0	27.0	8.0	100.0
Number of beneficiaries	179	1009	151	1339
In % of Total Beneficiaries	14	75	11	100.0

Source : Agence de Promotion de l'Industrie (API, 1992)

Table 3
The Size and Maturity Structure of Manufacturing Enterprises in Tunisia
(based on the API Survey of 853 Firms in 1990-1991)

Capital (in thousands of Tunisian dinars)	% of the Total	Number of Employees	% of the Total
Less than 50	69%	Less than 20	60.7
50 - 149	17%	20-39	15.5
150 - 300	7%	40-59	7.4
300 - 500	3%	60-99	7.2
Higher than 500	4%	100-149	3.1
Age of the Enterprise `		150-199	1.6
Less than 5 years	65%	200-299	1.3
5 - 10 years	28%	300 and over	1.1
More than 10 years	7%		

Source: API (1992).

Table 4
Sectoral and Regional Shares of FOPRODI Projects

SECTOR	Percent of Total Investment		REGION	<u>1976-90</u> Percent of No. of Projects\ Employment	
	1976-90	1997			
Food processing	19.9	20.3	North-West	12.0	7.7
Mechanical and electrical	24.8	17.2	North-East	57.6	57.6
Textiles and leather	20.6	29.5	Center-West	4.0	2.8
Construction materials	10.7	7.6	Center-East	23.0	26.0
Others	24.0	25.4	South-East	2.0	1.0
			South-West	1.4	4.8

Source : Agence de Promotion de l'Industrie (API, 1992)

Table 5
FOPRODI Projects : Processing time and Approval/Success Rates

	Approved Processing Time	Observed Processing Time	Approval or Success Rates (%)
Step I: Bank Screening	45 days	80 days	64.8
Step II: API Approval	1 month	2 months	85.0
Step III: Signing of the Contract Funding the Project	n.a.	up to six months	86.9
Step IV: Production	n.a.	6 months	89.2

Source: The estimates of processing time are taken from Najah (1992), based on interviews with both bank executives and FOPRODI borrowers. The approval and success rates were based on the results of an API survey of 2270 projects during the period 1976-90 (API, 1992) .

Table 6

Number of Projects and Jobs Created by Tranche, 1987-90

	Tranche 1	Tranche 2	Tranche 3	Total
No. of Projects	75	26	5	106
% of Total	70.8	24.5	4.7	100
No. of Jobs	6947	7358	3724	18,079
% of Total	38.5	40.8	20.7	100

Source: API Survey (1992).

Table 7
FOPRODI Loan Repayment Rates

	1976/86	1987/90	1997
Initial capital	26%	43.8%	
Bank credit			
Principal	42%	54.7%	56.5%
Interest	63%	55.6%	65.4%
TOTAL	47%	51%	56%

Source: API (1992) and Ministry of Finance data for 1997.