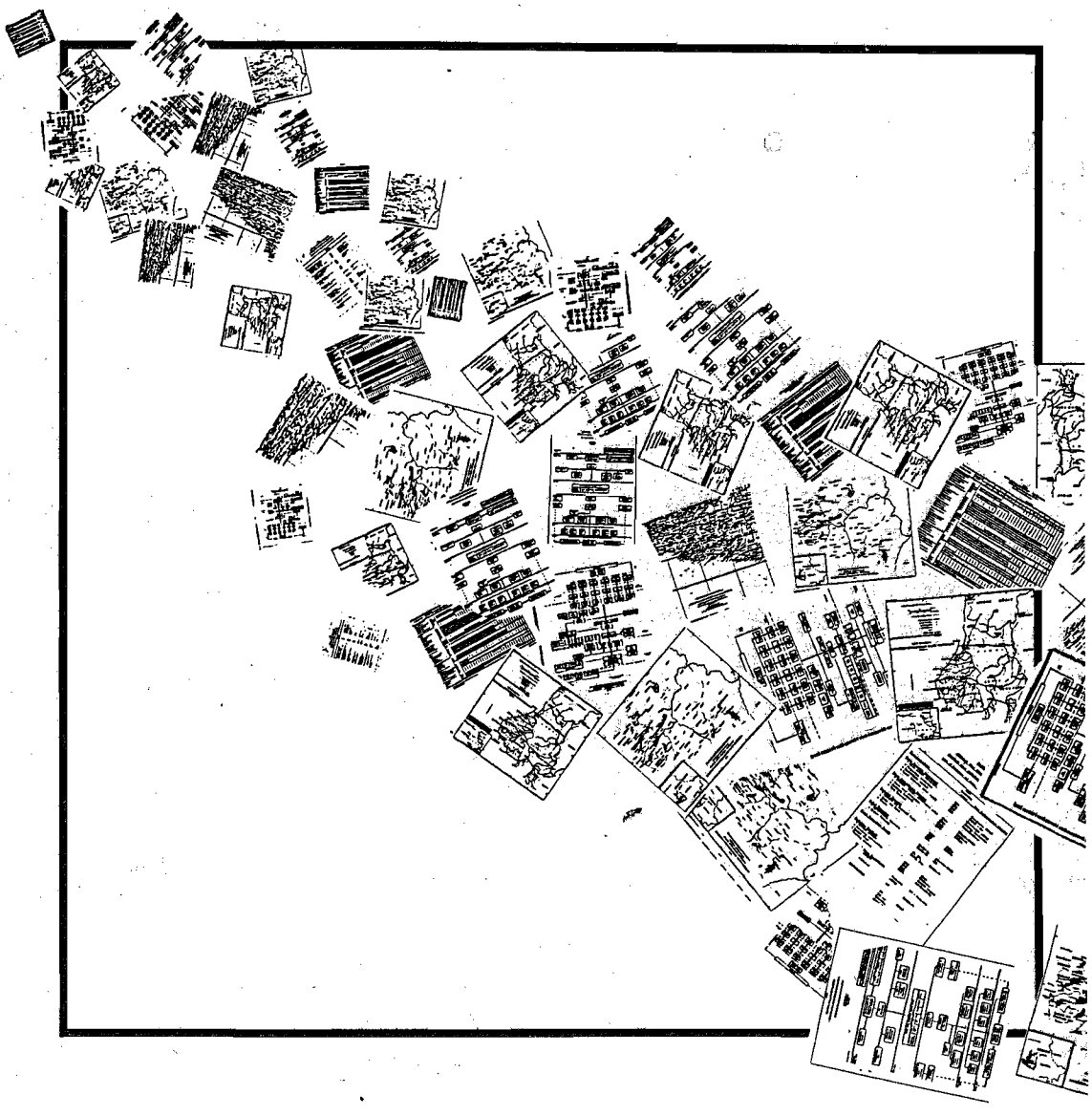
New Lessons from Old Projects:

The Workings of Rural Development in Northeast Brazil

Judith Tendler



Operations Evaluation Department

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Judith Tendler

Operations Evaluation Department
The World Bank
Washington, D.C.

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Foreword

This study, carried out under the aegis of the Bank's Operations Evaluation Department, identifies unusual patterns underlying good performance in rural development programs. By doing so, it suggests new ways of looking at the public sector's role in rural development. This in turn has implications for regional development project design.

Research for the study was carried out over a year (1988-89), including three five-week visits by the author to the projects; three weeks of interviews with Bank staff in Washington; interviews and data collection carried out by a research assistant, who spent a year in the program area; and examination of Bank files, staff appraisal reports, project completion reports, and performance audit reports.

The 22 projects reviewed were integrated rural development projects supported by the World Bank in the ten states of Northeast Brazil. Between 1975 and 1987, they received commitments of $3.3 billion from the Brazilian government. Targeted on the poor, they aimed to provide a complete array of development investments, ranging from roads, water, and health to agricultural credit, extension, and research.

The study found that the actual workings of the better-performing projects and programs differed significantly from plans and expectations. Some of the findings raise questions about the assumptions that commonly underlie agricultural, rural, and area development project design in many parts of the world.

A surprising finding is that project outcomes were observed to be highly sensitive to change in one or more of the following factors:

- Inherent complexity of assigned tasks.
- Presence of outside pressures.
- Built-in incentives to perform.
- Participation of keenly interested actors and progressive local elites.

The finding raises questions about the usual "institution building" paradigm of a linear, upward path of growth in an agency's capability. A situational, opportunistic approach to institutional development emerges as a plausible alternative.

The better-performing activities departed consistently from their original designs. Positive outcomes often materialized out of agencies not established or specialized in the activity assigned to them and not originally meant to carry it out, as well as from dynamic managers who did not want to limit their role to "coordinating" functions. Competitive pride and behavior were common with the usual positive connotation ascribed to such behavior in market settings.

Most of the episodes of better performance also showed a complementary, though unplanned, combination of action by local and state (or central) government. Local involvement helped to reduce costs and delays, make state agencies more accountable, and elicit greater use of local materials and labor. Such synergy is not typically factored into plans for improved public sector performance. Here too, the energies released by decentralization proved more relevant than the ex-ante logic of formal organizational schemes.

Agencies involved in the better-performing projects faced considerable outside pressure to be accountable, particularly from governors and other government agencies. That such pressures can induce good organizational performance is not new. But planners usually take an exclusively "supply-side" approach to designing programs, dedicating themselves mainly to building up the internal capacity of particular agencies. The study demonstrates that the capacity of agencies varied considerably in response to what was going on outside them, no matter how strong or weak their initial capacity was.

In brief, Professor Tendler's study presents a heterodox view of institutional design options for rural development. The insights generated by the study should encourage additional investigation in a neglected area of project evaluation.

Robert Picciotto
Director General
Operations Evaluation
June 1993

Prefácio

O presente estudo, realizado sob os auspícios do Departamento de Avaliação de Operações do Banco, identifica padrões incomuns subjacentes ao bom desempenho em programas de desenvolvimento rural. Ao fazê-lo, sugere novas formas para a abordagem do papel do setor público no desenvolvimento rural. Isso, por sua vez, encerra implicações para o desenho de projetos de desenvolvimento regional.

Para este estudo, a pesquisa realizada estendeu-se por um ano (1988-89) e incluiu três visitas da autora aos projetos, de cinco semanas cada uma; três semanas de entrevistas com técnicos do Banco, em Washington; entrevistas e coletas de dados, realizadas por um assistente de pesquisa, que permaneceu durante um ano na área do programa; e, no Banco, o exame de arquivos, relatórios de avaliação, relatórios de conclusão de projetos e relatórios de auditoria de desempenho.

Estudaram-se 22 projetos de desenvolvimento rural integrado em dez estados do Nordeste brasileiro, financiados pelo Banco Mundial. Entre 1975 e 1987, o governo do Brasil comprometeu $3,3 bilhões para esses projetos. Orientados para as camadas pobres, os projetos visavam a proporcionar toda uma gama investimentos de desenvolvimento: estradas, abastecimento de água e saúde, até crédito, extensão e pesquisa agrícola.

O estudo constatou que as ações reais dos projetos e programas melhor sucedidos diferiram significativamente dos planos e expectativas. Certas constatações suscitam dúvidas quanto aos pressupostos comumente utilizados no desenho de projetos de desenvolvimento agrícola e rural em muitas partes do mundo.

Constatação surpreendente é a de que os resultados dos projetos são altamente sensíveis a mudança em pelo menos um dos seguintes fatores:

- A complexidade inerente às tarefas atribuídas.
- A presença de pressões externas.
- A inclusão de incentivos de desempenho.
- A participação de protagonistas altamente interessados e de elites locais progressistas.

As conclusões suscitam dúvidas quanto ao paradigma usual de "fortalecimento institucional" de um processo de melhoria linear e ascendente da capacidade de uma instituição. Alternativa plausível é a adoção de uma abordagem de situação e oportunidade para o fortalecimento institucional.

As atividades que revelaram melhor desempenho discreparam sistematicamente do seu desenho original. Em muitos casos, os resultados positivos foram obtidos por entidades inexperientes ou não especializadas nas atividades que lhes foram atribuídas ou cujos serviços não estavam originariamente previstos, ou por administradores dinâmicos que não estavam dispostos a limitar sua participação a funções de "coordenação". O orgulho e o comportamento competitivo corresponderam à conotação geralmente positiva atribuída a esse comportamento no ambiente de mercado.

Em sua maioria, os episódios de melhor desempenho também revelaram uma combinação complementar, embora não planejada, de ações dos governos municipais e estaduais ou (federal). A participação local ajudou a reduzir custos e atrasos, tornou as entidades estaduais mais responsáveis e gerou maior uso de material e mão-de-obra local. Essa sinergia não é objeto de fatoração típica nos planos de melhoria do desempenho do setor público. Também sob este aspecto, as energias libertadas pela descentralização mostraram-se mais relevantes do que a lógica *ex ante* de planos organizacionais formais.

As entidades participantes dos projetos que registraram melhor desempenho sofreram considerável pressão externa, principalmente dos governadores e de outras entidades governamentais, no sentido de atuar com responsabilidade. É bem sabido que essas pressões podem induzir o bom desempenho organizacional. Contudo, os planejadores, ao desenharem os programas, geralmente adotam uma

abordagem exclusiva de "economia de oferta", dedicando-se inteiramente ao fortalecimento da capacidade interna de entidades em particular. O estudo demonstra que a capacidade das entidades variou consideravelmente em resposta ao que ocorria fora do seu âmbito, por forte ou fraca que fosse a sua capacidade inicial.

Em resumo, o estudo da Professora Judith Tendler oferece uma visão heterodoxa das opções de desenho institucional para o desenvolvimento rural. Os esclarecimentos gerados pelo estudo deveriam estimular a investigação adicional numa área negligenciada da avaliação de projetos.

Robert Picciotto
Diretor-Geral
Avaliação de Operações
Junho de 1993

Prefacio

En este estudio, llevado a cabo bajo los auspicios del Departamento de Evaluación de Operaciones, se identifican modalidades poco frecuentes que sustentan el buen rendimiento de los programas de desarrollo rural. De esto se desprenden nuevas maneras de abordar la función que le cabe cumplir al sector público en el desarrollo rural, lo que, a su vez, repercute en el diseño de los proyectos de desarrollo regional.

Las investigaciones realizadas a los fines de este estudio se llevaron a cabo en el transcurso de un año (1988-89), e incluyeron tres visitas de cinco semanas de duración que hizo la autora a los proyectos; tres semanas de entrevistas con personal del Banco en Washington; recopilación de datos y entrevistas efectuadas por un asistente de investigaciones que pasó un año en la zona del programa; además el examen de los archivos del Banco, los informes de evaluación inicial preparados por el personal, los informes de terminación y de evaluación *expost* de los proyectos.

Los 22 proyectos objeto de estudio eran de desarrollo rural integrado respaldados por el Banco Mundial, en los diez estados del nordeste del Brasil. Entre 1975 y 1987 el gobierno de ese país comprometió la suma de $3.300 millones para esos proyectos. Centrados en los pobres, representaban una gama completa de inversiones de desarrollo, desde carreteras, abastecimiento de agua y servicios de salud hasta crédito agrícola, extensión e investigaciones.

El estudio reveló que el funcionamiento real de los proyectos y programas en que se observaron los mejores resultados difería significativamente de los planes y de las expectativas. Algunos de los resultados plantean interrogantes acerca de los supuestos en que generalmente se basa el diseño de los proyectos agrícolas, rurales y de desarrollo subregional en muchas partes del mundo.

El estudio llegó a la sorprendente conclusión que los resultados de los proyectos eran sumamente susceptibles a las variaciones en uno o más de los siguientes factores:

- La complejidad inherente de las tareas asignadas.
- La presencia de presiones externas.
- Los incentivos intrínsecos del rendimiento.
- La participación de elementos sumamente interesados y de elites locales progresistas.

Esta conclusión plantea interrogantes acerca del paradigma habitual de "desarrollo institucional", que supone una pauta de crecimiento lineal y ascendente en lo que respecta a la capacidad del organismo. Surge como alternativa plausible al desarrollo institucional un enfoque situacional, centrado en las oportunidades que se presentan en cada caso.

Las actividades en que se observaron mejores resultados diferían, en forma sistemática, de los diseños originales. En muchos casos, se obtuvieron resultados positivos como fruto tanto de las actividades de organismos no establecidos o especializados en la actividad que se les había asignado y que no habían sido seleccionados originalmente para llevarlas a cabo, así como las de administradores dinámicos que no querían limitar sus funciones a las de "coordinación". Se observaron fuerzas y conductas competitivas, con la connotación positiva que es habitual en dichas conductas en el ambiente de mercado.

En la mayoría de los casos en que hubo mejores resultados se observó también una combinación complementaria, aunque no planificada, de las medidas tomadas por los gobiernos a nivel local y estatal (o central). La participación local contribuyó a reducir los costos y las demoras, a aumentar la responsabilidad de los organismos estatales, y a estimular el mayor uso de materiales y mano de obra locales. Este tipo de sinergismo no se incluye generalmente en los planes destinados a mejorar el desempeño del sector público. También en este caso, las energías liberadas por el proceso de descentralización resultaron más pertinentes que la lógica *exante* de los esquemas organizativos oficiales.

Los organismos participantes en los proyectos que tuvieron mejores resultados se enfrentaban a considerables presiones externas para aumentar su grado de responsabilidad, principalmente por parte de los goberna-

dores y de otras entidades públicas. No es sorprendente que este tipo de presiones pueda llevar a buenos resultados en cuanto a organización. Empero, los planificadores generalmente adoptan un enfoque exclusivamente favorable a la oferta en el diseño de programas, concentrándose principalmente en el fortalecimiento de la capacidad interna de organismos específicos. En el estudio se demuestra que la capacidad de los organismos variaba considerablemente en respuesta a lo que ocurría fuera de su ámbito, independientemente de su solidez o debilidad inicial.

En resumen, en el estudio de la Profesora Tendler se presenta un punto de vista heterodoxo con respecto a las opciones de diseño institucional de los proyectos de desarrollo rural. Las ideas generadas por el estudio deben fomentar investigaciones adicionales en una esfera que no se ha atendido adecuadamente en la evaluación de proyectos.

Robert Picciotto
Director General
Evaluación de Operaciones
Junio de 1993

Préface

Cette étude, exécutée sous l'égide du Département de l'évaluation rétrospective des opérations de la Banque, fait apparaître des caractéristiques peu courantes dans les bons résultats de programmes de développement rural. En même temps, elle laisse entrevoir une nouvelle vision du rôle du secteur public dans le développement rural, avec ce que cela implique pour la conception des projets de développement régional.

Les travaux de recherche effectués pour les besoins de cette étude ont duré plus d'un an (1988-89) et ont compris trois visites de cinq semaines chacune de l'auteur aux projets; trois semaines d'entrevues avec des fonctionnaires de la Banque à Washington; des entrevues et des travaux de collecte de données menés par un assistant de recherche qui a passé un an dans la zone des projets; et la consultation des dossiers de la Banque et des rapports d'évaluation, d'achèvement et d'évaluation rétrospective des projets.

Les 22 projets examinés étaient des projets de développement rural intégré financés par la Banque mondiale dans les dix états du Nord-Est du Brésil. Entre 1975 et 1987, ils avaient fait l'objet de 3,3 milliards de dollars d'engagements du gouvernement brésilien. S'adressant particulièrement aux pauvres, ils visaient à financer des investissements consacrés à un ensemble complet de travaux de développement, depuis les routes, l'alimentation en eau et la santé jusqu'au crédit agricole, à la vulgarisation et à la recherche.

Cette étude a permis de constater que les projets et programmes les plus performants s'étaient en fait déroulés de façon sensiblement différente de ce qui avait été envisagé et de ce à quoi l'on s'attendait. Certaines des conclusions ont amené à se poser des questions sur les hypothèses sur lesquelles repose généralement la conception des projets de développement agricole, rural et régional dans de nombreuses régions du monde.

On a été surpris de constater que les résultats des projets étaient très sensibles aux variations d'un ou de plusieurs des facteurs suivants :

- La complexité inhérente aux tâches assignées.
- La présence de pressions extérieures.
- L'existence d'incitations.
- La participation d'interlocuteurs véritablement intéressés et d'élites locales ouvertes au progrès.

Les résultats observés remettent en cause l'idée traditionnelle que l'on se fait du "renforcement institutionnel" comme d'une croissance des capacités des institutions selon une trajectoire rectiligne à pente ascendante. L'autre conception plausible qui émerge peu à peu est celle d'une approche fondée sur la situation réelle et sur l'opportunité.

Les activités les plus fructueuses s'écartent régulièrement de leur conception d'origine. On a souvent noté des résultats positifs de la part d'organismes qui n'étaient pas connus ou spécialisés dans l'activité qui leur avait été confiée ou à qui il n'était pas prévu de confier cette activité à l'origine, ainsi que de cadres dynamiques qui ne cherchaient pas à limiter leur rôle à des fonctions de "coordination". L'émulation inspirait souvent une certaine fierté et influait de façon positive sur le comportement face à la concurrence du marché.

La plupart des cas de bonne performance présentaient également un ensemble d'actions complémentaires quoique non planifiées des pouvoirs local et provincial (ou central). La participation locale permettait de réduire les coûts et les délais, de rendre les organismes d'état plus responsables et de susciter une plus grande utilisation des matières premières et de la main-d'oeuvre locales. En général, on ne prévoit pas cette synergie dans les plans visant l'amélioration de la performance du secteur public. Là encore, les énergies libérées par la décentralisation se sont révélées plus efficaces que la logique des plans formels d'organisation d'antan.

Les institutions qui ont participé aux projets les plus performants étaient beaucoup plus tenues d'agir de façon

responsable, face aux pressions extérieures auxquelles elles étaient soumises, notamment des gouverneurs et autres responsables gouvernementaux. On savait déjà que de telles pressions incitent à un effort d'amélioration au niveau de l'organisation. Cependant, le plus souvent les planificateurs chargés de la conception de programmes ne cherchent qu'à renforcer la capacité interne de certains organismes particuliers. L'étude montre que la capacité de ces organismes varie considérablement selon ce qui se passe à l'extérieur, quelque forte ou faible que puisse être leur capacité initiale.

En bref, l'étude du Professeur Tendler présente une vision hétérodoxe des options qui existent dans le domaine de la conception des institutions de développement rural. Les idées inspirées par cette étude devraient inciter à poursuivre la recherche sur cet aspect négligé de l'évaluation rétrospective des projets.

Robert Picciotto
Directeur général
Evaluation rétrospective
des opérations

Abbreviations and Acronyms

APCR	Apoio para Pequenas Comunidades Rurais (Support to Small Communities—Community Participation Component)
BANDEPE	Banco de Desenvolvimento do Estado de Pernambuco (State Development Bank of Pernambuco)
BNDES	Banco Nacional de Desenvolvimento Econômico e Social (National Bank for Economic and Social Development)
CPATSA	Centro de Pesquisas da Agricultura do Semi-Árido (Center for Research on Dryland Tropical Agriculture)
EMBRAPA	Empresa Brasileira de Pesquisa Agropecuária (Brazilian Agricultural Research Agency)
RD	Rural Development
OED	Operations Evaluation Department
PAPP	Programa de Apoio para o Pequeno Produtor (Program of Assistance to the Small Farmer)
POLONORDESTE	Programa de Desenvolvimento de Áreas Integradas do Nordeste (Program of Integrated Development for the Northeast)
SUDENE	Superintendência de Desenvolvimento do Nordeste (Northeast Regional Development Agency)
WB	World Bank

Executive Summary

In 1974, as part of a wider program targeted at poverty reduction in general, the Bank announced a bold new approach to reducing rural poverty and stimulating agricultural growth. Born out of dissatisfaction with the inability of past development efforts to reduce rural poverty and inequality, the "new style" rural development (RD) projects differed from, and supplemented, previous interventions in two ways. They targeted the poor directly with agricultural production services and subsidies. And they provided certain regions with a complete array of development investments, ranging from roads to agricultural credit to health—regions chosen for their agricultural potential and high concentration of small farmers. By 1986, twelve years later and after US$19.1 billion (current) of Bank commitments to RD worldwide, of which US$6.3 billion has been for "new style" area development projects, the new approach had fallen into disfavor. Myriad problems had plagued the implementation of the projects, and serious questions had been raised about their effectiveness at reducing poverty and increasing agricultural productivity. These concerns, outlined below, were laid out in a major review of the RD experience carried out by OED in 1987.

Though targeted rural development deserved much of the criticism it received, some of these projects—or parts of them—performed well. Though the exceptions in themselves do not justify bringing back this form of RD, they raise the question as to how some projects could have worked well with a design and in an environment now considered not conducive to good performance. More constructively, if certain projects or activities could stand the test of such adverse circumstances, they certainly must have some lessons to offer about improving the design of programs today. Though the Bank has largely abandoned the "new style" RD approach, it continues to devote major policy attention and resources to the same sectors, individually or in pairs, that were all linked together in the RD projects—agricultural research, agricultural extension, rural finance, irrigation, farm-to-market roads, drinking water, health, education.

Because past evaluations of the RD experience have been more illuminating about the causes of failure than about the causes of success—as the above-noted OED review itself pointed out—they have thrown more light on what *not* to do than on what *to* do. This study seeks to do the opposite. It identifies patterns that ran across a variety of instances of better performance in a set of 23 RD projects in Northeast Brazil—one of the Bank's most comprehensive RD programs. The study asks what lessons these patterns of good performance reveal about project design and, more generally, about the role of the public sector in rural development.[1] As the reader will see, the answers to this question do not add up to a case in favor of or against "integrated rural development," but are of relevance to a wide variety of projects and sectors in which the Bank operates today. As discussed in note 1, the Government of Brazil has been concerned that readers should not take this study as being in any way a substitute for an evaluation of the RD portfolio as a whole.

Various problems have afflicted certain types of the Bank's rural development projects worldwide, including those of the Northeast:(1) too many components and excessive complexity, (2) the lack of productivity-increasing technical packages for small farmers, (3) the absence of beneficiary participation in project design and implementation, and (4) a policy environment that penalized agriculture. The Northeast projects suffered, in addition, from (1) chronic delays in the transfer of Brazilian counterpart funds to the project units and executing agencies, and (2) the high and increasing rates of inflation (up to triple digits), and hence fiscal crisis, experienced by Brazil in the 1980s. This study asks why certain projects or agencies were sometimes free of these problems, or how they were able to perform well despite the presence of such adversity.

The Northeast Projects

Between 1975 and 1987, the Brazilian government committed US$3.3 billion to 22 integrated rural development projects in the ten states of Northeast Brazil[2] and a region-wide land-tenure project—of which the Bank financed 42 percent or US$1.4 billion. A "first generation" of these projects included roughly a dozen components—ranging from agricultural credit and extension through feeder roads and electrification to health and education, though any one project would not include all of them. The staples of each project were credit (23 percent), feeder roads (20 percent), land-related activities (16 percent), and agricultural extension (14 percent)—accounting for 72 percent of appraised costs. In an attempt to reduce the complexity of the projects and focus more exclusively on agricultural production, a second generation of projects eliminated health, education, and roads—as well as some smaller components. Credit (30 percent), extension (24 percent), and a new community-participation component (16 percent) accounted for 70 percent of expenditures projected at appraisal; associated land-related activities were unified in a separate regionwide land-tenure project (an additional 16 percent).[3]

Typical project organization involved the Bank and several levels of the Brazilian government—the federal government ministries, the Northeast regional development authority, semi-official banks, and the state-level project units and executing agencies. The project-coordinating units, set up in state departments of planning or agriculture, were in charge of designing the annual programs and supervising their implementation, but had neither executing responsibilities nor the formal power to grant funds or withhold them from the executing agencies—a subject treated in Chapter 2; an exception was the community-participation component (APCR)[4] in the second-generation projects, described momentarily, in which the project units shared formal implementation responsibilities with rural labor unions, extension services, and/or some farmer cooperatives. Municipal governments, though often represented on ad hoc councils that vetted the APCR sub-projects, had no formal place in the projects as such, but sometimes ended up making important contributions that were not anticipated (Chapters 2 and 3).

The community-participation component, at US$222 million, represented one of the most significant attempts of the Bank to make the implementation of its RD projects more participatory. The APCR fund, with the assistance of an average of 36 community agents and supervisory staff per state, makes grants of up to US$10,000 to associations formed in communities of less than 5,000 inhabitants: (1) 65 percent for community-owned ventures like grain-milling facilities, seed banks, input-supply stores, and storage facilities, (2) 25 percent for small works projects (road repair, community laundries, public toilets), and (3) 15 percent for institution-building in community organizations, used mainly by the rural labor federations for training.

Good Performance (Chapter 2)

Defining "success" or, more accurately, "better performance," turned out to be more difficult than originally expected. Early in the review, the cases of better performance *seemed* to be falling into three categories: (1) whole *projects* (Tabuleiros Sul in Sergipe, Ibiapaba in Ceará), (2) *components* (roads, electrification, drinking water, health, and education *versus* agricultural credit, research, and extension), and (3) *agencies* (the project unit in Sergipe). Because of the widespread dissatisfaction expressed by many with agricultural credit, research, and extension, moreover, several cases of successful disseminations of improved varieties to small farmers were also identified—in order to explore why performance had been so different in these cases (Chapter 5).

The three categories of projects, components, and agencies did not hold up for long. (1) The better-performing agencies did not always stay that way (and mediocre agencies sometimes performed surprisingly well); (2) good performance was often bracketed in time by the term of office of a particularly supportive and demanding governor (for example, 1982—86 in Sergipe, and 1987—89 in Bahia, Maranhão, and Pernambuco)—a subject treated in Chapter 2; (3) the high ratings given by many to infrastructure, health, and education sometimes said more about things *other than* impact or agency performance—for example, the relative conspicuousness of the results (new roads *versus* productivity-increasing seed varieties), or the relative easiness of the task (installing rural water systems versus agricultural extension); or the fact that the project unit or other agencies had taken the tasks away from the infrastructure agencies because they had been performing *inadequately*—the subject of Chapter 2; and (4) though many observers rated health and education high on impact, these components got consistently low grades for agency performance in supervision reports.

To sum up, there were no projects, components, or agencies that could be said to have performed consistently well throughout the whole period under review, or consistently better than the others. People talked about *episodes* of good performance that had come and gone, as distinct from consistently "good" agencies, components, or projects. Trying to make sense of these puzzling ebbs and flows of performance led to the discovery that good performance often had less to do with the *inherent capabilities* of an agency itself than with a set of other factors—namely, (1) the ease and difficulty of tasks, (2) the presence of outside pressures, (3) built-in incentives to perform, and (4) the involvement

of keenly interested actors and organizations at the local level. When one of these variables changed significantly, performance went from good to bad, or vice versa. Since project design and supervision tend to concentrate on improving the inherent capacity of agencies, this finding might seem to make the task of institution building even more difficult. But it is often no more difficult to influence these variables than it is to improve, from the inside, the quality of what agencies do—sometimes it is even easier.

A few caveats on what this study does *not* do. As explained in note 1, the study does not discuss macro policy issues like overvaluation of exchange rates and other policies affecting agricultural exports, or subsidization of agricultural credit and other inputs. Second, it does not attempt to judge the strategy of the Brazilian government or the Bank for alleviating poverty in the Northeast. Third, it is not an evaluation of the Northeast projects, nor of integrated rural development in general.

Reinventing the Projects (Chapter 2)

The better-performing activities departed consistently from their original design in five ways. (1) They were often implemented in *less time* than that allowed for at appraisal—the installation of wells and standpipes in rural communities, campaigns to widely distribute improved varieties of seed and rootstock and, in some cases, the acquisition of land for redistribution. This happened against a general background of *delays* in execution; which had actually caused the Bank to lengthen the execution period from five years in the first-generation projects to more than eight years in the second generation. The longer execution periods, though seemingly more appropriate for such difficult tasks of institution building, actually *deprived* the projects of certain pressures and incentives that were very much present in the environment of the good performers.

(2) The better-performing projects ended up being a much *narrower* version of what was envisioned at appraisal, with one or two components elevated to center stage. Particular favorites were rural water, community participation, and land-distribution activities. This "reinvention" could take place because (a) a supportive governor would choose one of the project's components as his "signature" activity; (b) project managers gravitated toward their *own* favorite components; (c) shortfalls and delays in the transfer of counterpart funds—though a major problem throughout implementation—scrambled budgets enough to give project managers liberty to remold the projects to their liking and reduce them to more manageable proportions.

(3) The relative *ease* (or difficulty) of the tasks that the projects assigned to agencies influenced their ability to perform well. Water agencies found rural water supply to be easier than irrigation, for example, because water was less "analysis-intensive" and less dependent on outsiders beyond one's control—namely, other agencies and users. This explains why the design and installation of rural-water systems typically went better than irrigation, as well as why Sergipe's new rural water agency performed well in rural water and poorly, subsequently, in irrigation. Also, the goals and standards of the projects themselves made tasks more difficult or unsatisfying to some agencies—namely, the redirecting of public-sector services toward the poor, the desire to rely on less capital-using technologies for infrastructure and, partly a reflection of the latter, the concern about reducing unit costs and reaching larger numbers of people.

(4) When performance was good, project management had been subject to clearly identifiable outside "demand" *pressures* to get things done, reach significant numbers of people, reduce costs, or be accountable in other ways. These pressures came not only from beneficiaries, but from governors, other state agencies, development banks, municipal governments, nongovernment organizations, the World Bank. The arrival of such pressures on the scene helps explain why mediocre agencies sometimes produced surprising bursts of good performance; the lack or withdrawal of such pressures also helps explain why agencies already deemed strong suddenly performed poorly.

(5) Better-performing agencies routinely "took over" tasks from the agencies meant to carry them out. First, the excellent public managers who were attracted to the project-coordinating units did not want to "merely" coordinate the work of other agencies, but wanted to "carry things out" themselves. Second, managers took over tasks out of frustration with footdragging or shoddy work by the designated executing agency; "takeover" gave them the control they desired over the pace, quality, and cost of project execution, and made their work less vulnerable to uncertainty and ill will. Third, powerful and supportive governors, impatient with "the lack of results" from the established agencies, sometimes helped give project managers the excuse and the wherewithal to take over from the other agencies.

How could agencies in an institutionally "underdeveloped" environment and with no experience at a task have simply taken over from the established agencies and done a reasonable job? First, they sometimes broke project rules and contracted out the work to public agencies other than the designated ones, or to private firms or nongovernment organizations; they succeeded best at getting other agencies to perform, in other words, *not* when they were "coordinating" these agencies but when they had the power to contract or force the agencies to do what was required. Second, when a project unit or other agency lavished its attention and scarce funding on the components it could manage better, this reduced the complexity and difficulty of the projects for them. Third, the takeover agencies *liked* the

tasks that the established agencies disliked; this gave them and their staff the advantage of high motivation, which often turned out to be more important to good performance than long experience with an activity. Fourth, because public-sector professionals flowed back and forth between agencies, the takeover agencies could draw on the expertise of *all* professionals in the public sector—getting a specialist seconded to them, often from the taken-over agency itself. Indeed, creating a pool of such expertise in the public sector of the Northeast may be one of the most important contributions of the Northeast projects—not fully appreciated precisely because it is an externality and therefore not captured in the evaluation of any particular "unstable" agency.

The takeover phenomenon, and its association with better performance, throws some light on the issue of working with established agencies versus creating new ones. Learning from past experience, the Bank and the Brazilians decided to work through *established* agencies in the Northeast projects—creating from scratch only a "modest" project-coordinating unit, which had no executive functions. But the takeover stories often showed good performance coming also from agencies *not* established or specialized in a particular activity, and *not* originally meant to carry out the component—as well as from dynamic managers *not* wanting to play "modest" coordinating roles. The importance of takeover also helps explain why there was so much dissatisfaction with agricultural extension, research, and credit: these components were simply more difficult to take over than the others. Finally, takeover was not always associated with good performance, and established agencies designated at appraisal did not always perform poorly. Rather, takeover and good performance were associated with each other in enough cases to draw one's attention and to require an explanation.

Mobilizing Additional Finance (Chapter 3)

Better-performing projects, or pieces of them, frequently elicited the mobilization of additional resources above and beyond what was expected at appraisal—by governors, agency managers, state secretaries, mayors, banks, or beneficiaries themselves. These resource-mobilizing initiatives merit close attention because they occurred at a time of extreme fiscal austerity in Brazil, when it was difficult enough to get the Brazilian government to come up with counterpart funding for the projects, let alone with unanticipated *additional* funding. Three examples of this resource mobilization follow.

(1) A state loan fund for works projects in municipalities resulted in a kind of informal municipal betterment levy in the form of land, materials, and fencing. (2) A Bank imposed ceiling on per-hectare costs for tubewell and riverine irrigation led to the unanticipated donation of land for small-scale irrigation by municipalities and by private farmers in an innovative cost-sharing arrangement. (3) A healthy spread between the return paid by rural banks on deposits and what they earned on lending led to aggressive mobilization of deposits by rural banks *and* increased lending to small farmers. Interestingly, none of the incentives of these cases to mobilize additional resources were intentional, but there is no reason why they could not be.

A considerable part of these additional resources came through municipal governments. Yet they had no formal role in the Northeast projects because they are typically seen as bankrupt, clientelistic, and the technically inadequate, which is often true. In each category of examples, some cases involved the Northeast projects, some involved other projects intermingled with the Northeast projects, and a few did not involve these projects at all, though the design features and place of implementation were quite similar. The way in which the municipalities were drawn into resource mobilization, moreover, transformed them into a source of healthy outside pressure on *state* agencies to behave accountably, get things carried out on time, keep costs down, and use less sophisticated and capital-intensive standards. Bank staff had tried, often to no avail, to accomplish the same thing.

Bank concern about resource mobilization has concentrated almost exclusively on securing the commitment of counterpart funding *before* projects begin, and in cajoling federal and state governments to come up with the promised funding during implementation. The additional resources mobilized in these cases were *not* committed beforehand: they resulted from a structure of incentives that made it worthwhile for institutions and individuals to contribute *after* things got going—and in a way that did not add to inflation or the fiscal deficit. Bank-sponsored and other research, moreover, has demonstrated that the mobilization of rural savings is critical for the development of strong *rural financial institutions* which, in turn, are critical for agricultural development itself. But the Bank's agricultural and rural development projects have not linked the provision of credit to the mobilization of deposits, a linking that could also help to solve the problem of excessively subsidized interest rates.

The Question of Land (Chapter 4)

Some important lessons about land emerge from putting together (1) the above-noted cases of additional resource mobilization in land, (2) some aspects of agrarian reform and settlement in Bahia, Ceará, and Maranhão, and (3) a successful experience with cooperative land purchase and settlement in Sergipe. There was some variation across these cases in the characteristics of land tenure and the availability of land for expropriation or purchase. Nevertheless, some common themes ran across these

disparate cases which pointed to an approach to land settlement that was cheaper, quicker, more decentralized, more reliant on settler participation, less adversarial than expropriation, and more economically viable.

First, land markets worked better for small farmers when local organizations (coops, labor unions, local government) and beneficiaries participated in the search for land, the decision to acquire it, and the settling of its price. Second, this more decentralized approach introduced some checks against collusion between large landowners and the state. Third, many cases of successful land transfer (and of successful agricultural development) took place at the edge of "internal frontiers" in *already settled* regions, where the market promised clear returns from the intensification of agriculture in small farmer crops—tomatoes in Ibiapaba, oranges in Sergipe, irrigated vegetables in the Irecê region of Bahia. This particular feature stands in contrast to the customary view that the increase in land values accompanying development and the intensification of land use makes land-transfer actions *less* possible. Fourth, opportunities for transfer in the more settled regions occurred in "patches" rather than the large blocks customarily envisioned by planners for settlement projects. Fifth, dedicated project managers were highly motivated to make land markets and other mechanisms work in a way that would "produce" land parcels at low cost or none at all, because (1) expropriation of parcels under 500 hectares was not allowed by the law, leaving purchase or acquisition by donation as the only option available for acquiring smaller parcels, and (2) more project funding was available for infrastructure investments and agricultural services than for land acquisition (by expropriation *or* purchase). Sixth, small-scale private irrigation associated with high-value agricultural production was a notable feature of several of the cases reviewed.

The lessons of these cases suggest greater possibilities for land transfer to landless farmers than those conveyed in the *World Development Report, 1990* on poverty. They also have particular relevance for that report's new focus on "rural infrastructure" as a means to bring about equity-oriented rural development. In the most successful cases described above, that is, project agencies strictly linked the provision of roads and irrigation to the process of acquiring land and transferring it to small farmers. The Ibiapaba project was an exception: the project provided roads and electrification without securing the distribution of land, contributing to the inequality of landholdings becoming worse than it was before the project.

Research, Extension, and Agricultural Development (Chapter 5)

During the episodes of successful dissemination of improved varieties, the *nature of the task and the environment* faced by the executing agencies was strikingly different from what they were doing during other times. The chronic inability of research and extension to collaborate disappeared; or coordination between extension and research turned out *not* to be necessary for adaptation and dissemination to occur. Many of these episodes originated in "campaigns" against crop disease and pests—the boll weevil in the cotton-producing states, orange disease in Sergipe, and banana-root fungus in Paraíba—and transformed the work environment of research and extension in the following ways:

(1) Attention was riveted on a *single crop*, or a *single problem* with that crop. (2) Results were clearly *measurable*, penalties for poor performance were high, and performance was judged in terms of *outputs* (for example, reduced levels of pest incidence, number of diseased plants eradicated). (3) Powerful "demanders" were frequently on the scene, loudly clamoring for results—governors, directors of other agencies, mayors, farmer associations, and high-level officials who worried about the serious impact of possible crop loss on state tax revenues and on the region's agricultural economy. (4) The task had a *clear beginning and end*, usually within the four-year period of a governor's mandate and sometimes even within a one-year crop cycle—well within the five-to-eight year life, in other words, of the RD projects. (5) The intense public-sector effort mobilized around the crop in a particular region, and for a limited period of time, guaranteed the smooth *supply of the improved inputs* that was so problematic in more routine times; reducing input-supply uncertainties, in turn, made adoption more attractive to small farmers. (6) The *agency* itself felt energized, and instilled with a sense of mission, by having such a concrete and dramatic problem to work on, with potentially large and foreseeable results. (7) Local *boosterism* played an important role in driving many of these stories of agricultural dissemination and, more broadly, of microregional development. Though this list of traits might seem unique to disease and pest campaigns, various other episodes of good performance by extension and research turned out to have at least some of these same characteristics.

The traits named above contrast sharply with those under which extension and research customarily work. Typically, (1) performance is measured in terms of *inputs*—number of farmers visited, number of courses given, number of demonstration plots—as opposed to outputs like adoption rates of improved varieties or yield increases; (2) agencies work on a *broad* agenda of crops and activities, and for *open-ended* periods of time, with no urgency behind the introduction of any particular improved variety or practice; (3) frequently, neither the private nor the public sector is able to provide the improved inputs smoothly, in a timely way, and at reasonable cost—thus reducing the returns to be had from their adoption. The disease campaigns and

other episodes of better performance redefined the task of extension and research, in sum, in a way that made it possible to get good performance out of the same agencies that did not do well with a much broader agenda.

Conclusions and Recommendations

Projects performed better when (1) agencies had more control over the quality and pace of project execution, which they acquired partly by carrying out tasks that other agencies were supposed to—or by contracting these out and supervising them; (2) project tasks were particularly "easy," or new agencies and units could "cut their teeth" on easy first tasks, or the project was changed in a way that made difficult tasks easier; (3) incentives were such that additional financing from government or beneficiaries was elicited during the course of implementation, and in a way that made for better-quality projects; (4) agencies were subject to pressures from the outside to be accountable, particularly pressures from "demanders"; and (5) there was an unusually complementary combination of action by state and local government—the local involvement helping to reduce costs and delay, make state agencies more accountable, and elicit the greater use of local materials and labor.

Though the importance of *demand pressures* in inducing good performance is not a new finding, the Bank and other donors customarily take a "supply-side" approach to project design—dedicating themselves mainly to building up the capacity of particular agencies. Though the realm of demand might seem beyond the reach of project officers, the experience reviewed provides numerous examples of how agencies could be subjected to these kinds of demand pressures. Two particular suggestions are:

- "Good" governors and other elected leaders could be attracted to support projects more by breaking up planning-and-execution periods into four-year cycles that coincide with the election cycle. These leaders could be allowed to pick and choose from a "menu" of possible activities that the Bank would support—which is what many governors did anyway, in backing only the components they liked best and sometimes raising additional funding for them. There should be enough flexibility for one state to choose rural water and another small-farmer credit—just as the Sergipe governor and the Pernambuco governor, respectively, did. This contrasts with current project design, in which the many components and the long execution periods cause elected leaders to lose interest, or use project resources simply to meet short-term budget needs or pay off political debts.
- Executing agencies should be subjected to demand "shocks" by channeling a part of their funding through the "users" of their services—not just beneficiary groups, but other public agencies, development banks, municipal governments. Just as the takeover managers contracted out what they could not do themselves or get the executing agencies to do, the demanders would "contract" the supplier agencies for their services. Funding supplier agencies through users would also bring to the project environment the traits of the successful cases: narrowly specified tasks, measurable and conspicuous standards for performance, and clear penalties for not performing.

Activities should be chosen for funding and assigned to particular agencies partly in accordance with their relative *ease and difficulty*. Some examples of possible "easier" tasks—at least to start out—are campaigns to combat epidemics of crop disease and pests, installation of simple rural water systems, and some forms of land acquisition. Given the new interest in rural infrastructure, moreover, it must be recognized that established infrastructure agencies often do quite poorly at tasks assigned to them by Bank projects of this nature; other agencies, with less experience or specialized expertise, often do better. This suggests that such activities should sometimes be placed outside their traditional bureaucratic homes, perhaps only temporarily, in "inappropriate" agencies or even new units—*if* these units are more motivated by sympathy and outside pressures to do well.

With respect to the lessons to be drawn from the *takeover* experience in general, (1) a *single* agency should be given sole power over a project, whether the tasks are few or many, whether that agency is an established one or new, or whether it is an executing agency or a coordinating unit; and (2) that single agency should be given the political and financial wherewithal to carry out the project's tasks itself or contract them out—to other public agencies, private firms, or nongovernment organizations. The lesson of the takeover experience, in other words, is *not* that (1) the Bank should go back to creating new and powerful parastatals; *nor* (2) that project units (as opposed to other agencies) should necessarily be given the power to carry things out themselves; *nor* (3) that the number of tasks should simply be reduced—though that wouldn't be a bad start.

Based on the findings stated above, the operational conclusions for *research and extension* are fairly clear. (1) Projects should favor single-crop or other highly-focused interventions, with a clear beginning and end, and that tend to have results measurable in terms of *output*. Though the broad-palette type of support currently provided is more consistent with the recent emphasis on farming-*systems* research, it is also organizationally burdensome; this kind of support is more appropriate in projects dedicated to building up a *single* agency over a long period of time—like the Bank's successful support to Brazil's agricultural-research parastatal, EMBRAPA, over many years. (2) Projects should fund research and extension at least partly through "demanders" because they place a higher value on applied work and dissemination than research agencies do. (3) Projects

should fund research centers to more widely disseminate one or two of their favorite successes.

More generally, the Bank should (1) take more of an "urban" approach to its rural projects—as in its "intermediate-cities" projects in Brazil and elsewhere—resorting to matching funds and other incentives as a way of (a) tapping into the resources and developmental entrepreneurship available at the local level, and (b) placing certain functions at a level where they work better; (2) pay more attention to linking small-farmer lending to the mobilization of rural savings, which may require projects focused exclusively on rural financial institutions and *not* therefore embedded in agricultural-development projects; and (3) act on the myriad possibilities for mediating the transfer of land to small farmers for productive agriculture in a more decentralized way, particularly in conjunction with the provision of roads and irrigation water.

Notes

1. In commenting on a draft of this report, the Secretariat for Regional Development of the Office of the President emphasized that this report does not follow the usual approach used by the World Bank in analyzing Bank-financed projects. As explained in the text this study is, intentionally, *not* an evaluation of the Northeast projects, but has viewed them with a particular question in mind and a concern for arriving at conclusions of general utility outside RD and outside the Bank. The Secretariat would have also liked to see a fuller treatment of various issues (the economic, political, social and cultural context of the region and the country; the relationship of the takeover discussion to issues of management and of the allocation of resources among components; the relationship of good performance to different social groups like landowners, squatters, sharecroppers, tenant farmers; the relationship of the single-crop successes to issues of market distribution, information on which project did well in terms of spending a lower percentage of project tasks on administration). We could not be more in agreement that these subjects merit a much fuller treatment, but were not able to do so because of constraints on time, financial resources, and length of the final report. We agree that these are issues of importance, and would endorse the need for further evaluation work, as the Secretariat suggests, on the joint World Bank and Government of Brazil projects in the Northeast. The Secretariat would also have liked to see an investigation of the components where interagency coordinating did *not* work well. We have not, indeed, analyzed poorly performing components in detail in this report, partly because we have done so more generally in other evaluation studies, particularly OED's 1988 report on (worldwide) experience with RD. More to the Secretariat's point, this report does describe what worked well in the context of the most frequent types of failures—for example, to deliver credit on time for planting, of extension and research to collaborate, of projects or components to be carried out on time. A number of OED audits have discussed the problems of individual projects. This work is no substitute for an evaluation of the portfolio of projects, or a study of Northeast Brazil, rather it uses the unusually large sample of related projects to provide pointers to the Bank and development economists generally on effective project design for delivery of assistance to the rural poor.

2. Alagôas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe, and Minas Gerais. See note 3 in Chapter 1 for an explanation of why the non-Northeast State of Minas Gerais was included in these "Northeast" projects.

3. The Bank's Regional Office notes that the "second generation" of projects has been reformulated. The lessons distilled in this report have been drawn from the first and second generation projects, as originally implemented. The Region has also commented that "the implementation of the 'second generation' is only, at best, at the midpoint and has been very distorted by financing problems, conclusions reached drawing on experience from that generation are largely unrelated to the project design."

4. Apoio para Pequenas Comunidades Rurais (Support to Small Rural Communities).

Resumo

Em 1974, no âmbito de um programa maior orientado para a redução geral da pobreza, o Banco anunciou um novo e ousado esforço para reduzir a pobreza rural e estimular o crescimento agrícola. Nascidos da insatisfação face ao malogro de esforços de desenvolvimento anteriores para reduzir a pobreza e a desigualdade no meio rural, os projetos de desenvolvimento rural (DR) do "novo estilo" eram diferentes e suplementavam intervenções anteriores, de duas maneiras. O seu foco se voltava diretamente para os pobres, com serviços e subsídios à produção agrícola. E proporcionavam a certas regiões uma série completa de investimentos no desenvolvimento, de projetos rodoviários ao crédito agrícola e à saúde — escolhidas essas regiões pelo seu potencial agrícola e pela alta concentração de pequenos fazendeiros. Em 1986, passados 12 anos e após ter sido comprometido pelo Banco um total de US$19,1 bilhões (correntes) em DR em todo o mundo, compreendendo US$6,3 bilhões para projetos de desenvolvimento regional do "novo estilo", o novo enfoque perdera o seu atrativo. Uma infinidade de problemas havia prejudicado a execução dos projetos e tinham sido levantadas sérias indagações com relação à sua eficácia para reduzir a pobreza e aumentar a produtividade agrícola. Essas inquietações, adiante resumidas, foram expressas numa grande revisão da experiência de DR levada a cabo pelo OED em 1987.

Embora se justifiquem muitas das críticas feitas ao desenvolvimento rural dirigido, alguns desses projetos — ou partes deles — tiveram bom desempenho. Ainda que não justifiquem em si mesmas a restauração dessa forma de DR, essas exceções levam a perguntar como teria sido possível que certos projetos se saíssem bem com um esquema e num ambiente hoje considerados como pouco propícios a um bom desempenho. Por um prisma mais construtivo, se foi possível a certos projetos passar pelo teste de condições tão adversas, eles certamente encerrarão certas lições a oferecer no tocante à melhoria da formulação de programas de hoje. Embora o enfoque do DR pelo "novo estilo" haja sido em grande parte abandonado pelo Banco, este continua a dedicar atenção maior em matéria de política e recursos aos mesmos setores que, individualmente ou aos pares, haviam sido agrupados juntos nos projetos de DR: pesquisa agropecuária, extensão agrícola, financiamento rural, irrigação, estradas de escoamento da produção, água potável, saúde e educação.

Pelo fato de que terem sido esclarecedoras com relação mais às causas do malogro do que às causas do sucesso — como assinalou a própria revisão do OED já mencionada — prévias avaliações da experiência de DR lançaram mais luz sobre o que *não* se deve fazer do que sobre o que *deve* ser feito. Este estudo procura fazer o contrário, identificando aspectos comuns a diversos casos de desempenhos melhores, num conjunto de 23 projetos de DR no Nordeste do Brasil — um dos mais abrangentes programas de DR do Banco. O estudo pergunta que lições revelam esses padrões de bom desempenho sobre a formulação de projetos e, de modo mais geral, sobre o papel do setor público no desenvolvimento rural.[1] Como verá o leitor, as respostas a essas indagações não configuram um argumento favorável ou contrário ao "desenvolvimento rural integrado" , mas aplicam-se a uma grande variedade de projetos e setores em que o Banco opera hoje em dia. Como se assinala na nota 1 (e no Anexo 1), o Governo do Brasil não desejaria de maneira alguma que os leitores considerassem este estudo como substituto de uma avaliação da carteira de DR no seu todo.

Vários problemas têm afetado certos tipos de projetos de desenvolvimento rural do Banco em todo o mundo, inclusive os do Nordeste: (1) excesso de componentes e excessiva complexidade, (2) falta de pacotes técnicos para aumentar a produtividade dos pequenos agricultores, (3) falta de participação de beneficiários no desenho e execução de projetos e (4) um ambiente normativo que onera a agricultura. Ademais, os projetos do Nordeste sofreram (1) demoras crônicas na transferência de fundos de contrapartida brasileiros às respectivas unidades e órgãos executores

e (2) taxas elevadas e crescentes de inflação (chegando a três dígitos) com a conseqüente crise fiscal pela qual passou o Brasil na década de 1980. Este estudo pergunta por que certos projetos ou organismos ficaram por vezes indenes a esses problemas ou de que forma puderam operar com êxito, apesar da presença de tais condições adversas.

Os Projetos do Nordeste

De 1975 a 1987, o governo brasileiro empenhou US$3,3 bilhões em 22 projetos de desenvolvimento rural integrado em dez estados do Nordeste[2] e num projeto regional de regularização fundiária, dos quais o Banco financiou 42 por cento ou US$1,4 bilhão. A "primeira geração" desses projetos compreendia aproximadamente uma dúzia de componentes, variando de crédito agrícola e extensão a estradas alimentadoras e eletrificação, e a saúde e educação, embora nem todos incorporados em um único projeto. Os elementos fundamentais de cada projeto eram crédito (23 por cento), estradas alimentadoras (20 por cento), atividades concernentes à terra (16 por cento) e extensão agrícola (14 por cento) — perfazendo 72 por cento dos custos na avaliação. Objetivando reduzir a complexidade dos projetos e concentrar-se mais exclusivamente na produção agropecuária, a segunda geração de projetos eliminou os componentes de saúde, educação e estradas, assim como outros componentes menores. O crédito (30 por cento), a extensão (24 por cento) e a participação comunitária, um novo componente (16 por cento), perfizeram 70 por cento dos gastos projetados na avaliação, enquanto que as atividades afins relacionadas com a terra foram unificadas num projeto regional separado de regularização fundiária (outros 16 por cento).[3]

A organização típica de um projeto abrangia o Banco e vários níveis do governo brasileiro: ministérios federais, a superintendência regional do desenvolvimento do Nordeste, bancos semi-oficiais e entidades executoras. Cabia às unidades coordenadoras de projetos, criadas nas secretarias estaduais de planejamento ou agricultura, a tarefa de elaborar programas anuais e supervisionar a sua execução, sem ter, contudo, responsabilidades executivas ou poderes formais para conceder ou reter recursos das entidades executoras — assunto examinado no Capítulo 2. O componente de participação da comunidade (APCR)[4] era a exceção nos projetos de segunda geração, que logo passaremos a descrever e nos quais as unidades de projeto compartilhavam responsabilidades de execução com sindicatos de trabalhadores rurais, serviços de extensão e/ou certas cooperativas agrícolas. As prefeituras, embora freqüentemente representadas nos conselhos *ad hoc* que avaliavam os subprojetos de APCR, não tinham participação formal nos projetos como tais, mas acabaram por vezes oferecendo importantes contribuições que não haviam sido previstas (Capítulos 2 e 3).

O componente de participação da comunidade, com um total de US$222 milhões, representou um dos mais significativos esforços do Banco para tornar mais participativa a implementação de seus projetos de DR. O fundo APCR, com assistência de uma média de 36 agentes comunitários e pessoal supervisor por estado, outorga doações de até US$ 10.000 a associações formadas em comunidades de menos de 5.000 habitantes: (1) 65 por cento para empreendimentos pertencentes à comunidade, como moinhos de cereais, bancos de sementes, entrepostos de insumos e suprimentos e instalações para armazenagem; (2) 25 por cento para projetos de pequenas obras (reparos de estradas, lavanderias comunitárias, banheiros públicos): e (3) 15 por cento para fortalecimento institucional de organizações comunitárias, usadas principalmente para treinamento pelas federações de trabalhadores rurais.

Bom Desempenho (Capítulo 2)

Definir "sucesso" ou, mais precisamente, "melhor desempenho", veio a ser mais difícil do que a princípio se esperava. No início da análise, os casos de melhor desempenho *pareciam* cair em três categorias: (1) *projetos* completos (Tabuleiros do Sul, em Sergipe, Ibiapaba, no Ceará); (2) *componentes* (estradas, eletrificação, água potável, saúde e educação vs. crédito, pesquisa e extensão agropecuária); e (3) *repartições* (a unidade de projetos em Sergipe). Ademais, dada a insatisfação geralmente manifestada por muitos quanto ao crédito agrícola, à pesquisa e à extensão, foram também identificadas — a fim de explorar as razões pelas quais foi tão diferente o desempenho nesses casos — várias ocorrências de disseminação bem-sucedida de variedades melhoradas entre pequenos agricultores (Capítulo 5).

As três categorias de projetos, componentes e repartições não duraram muito. (1) As entidades com melhor desempenho nem sempre assim permaneceram (e repartições medíocres por vezes tiveram atuação surpreendentemente boa); (2) a duração do bom desempenho muitas ficava limitada ao período de mandato de um governador particularmente compreensivo e exigente (por exemplo, 1982-86 em Sergipe e 1987-89 na Bahia, no Maranhão e em Pernambuco) — aspecto abordado no Capítulo 2; (3) a alta classificação dada por muitos a projetos de infra-estrutura, saúde e educação por vezes revelava mais sobre *outras* coisas *que não* o impacto ou o desempenho da entidade, como, por exemplo, a relativa evidência dos resultados (novas estradas vs. variedades de sementes que aumentam a produtividade), a relativa facilidade da tarefa (instalação de sistemas rurais de abastecimento de água vs. extensão agrícola) ou o fato de que haver a unidade de projetos ou outra repartição retirado certas tarefas das agências de infra-estrutura porque estas estavam tendo desempenho *inadequado* — o

assunto do Capítulo 2; e (4) embora muitos observadores tenham atribuído alta classificação ao impacto de projetos de saúde e educação no tocante ao impacto, tais componentes sempre tiveram classificação baixa nos relatórios de supervisão do desempenho das repartições.

Em suma, não houve projetos, componentes ou repartições que se pudesse dizer que tiveram desempenho sempre bom durante todo o período analisado, ou uma atuação sempre melhor que a de outros. Ouviu-se falar de *episódios* de bom desempenho, que haviam ocorrido e desaparecido, como algo diferente de repartições, componentes ou projetos sempre "bons". A tentativa de encontrar um sentido nessas flutuações inexplicáveis do desempenho levaram à descoberta de que o bom desempenho muitas vezes tinha menos a ver com as *capacidades inerentes* da própria entidade do que com um conjunto de outros fatores, a saber: (1) a facilidade e dificuldade das tarefas, (2) a presença de pressões externas, (3) incentivos internos para um bom desempenho e (4) a participação a nível local de atores e organizações profundamente interessadas. Quando uma dessas variáveis mudava significativamente, o desempenho passava de bom a mau, ou vice-versa. Como o desenho e a supervisão de projetos tendem a concentrar-se na melhoria da capacidade inerente das entidades, este achado poderia dar a impressão de tornar mais difícil a tarefa de fortalecimento institucional. Muitas vezes, porém, influenciar essas variáveis não é mais difícil do que melhorar a partir de dentro a qualidade do que fazem as repartições — sendo, por vezes, ainda mais fácil.

Algumas advertências sobre o que *não* faz este estudo. Como se explica na nota 1, o estudo não entra em questões de política macroeconômica tais como a sobrevalorização das taxas cambiais e outras políticas que afetam as exportações de produtos agrícolas, ou a subsidiação do crédito agropecuário e de outros insumos. Em segundo lugar, não procura aquilatar a estratégia do governo brasileiro ou do Banco para aliviar a pobreza no Nordeste. Em terceiro, não pretende ser uma avaliação dos projetos do Nordeste nem do desenvolvimento rural integrado em geral.

Reinventando os Projetos (Capítulo 2)

Via de regra, as atividades com melhor desempenho desviaram-se da sua configuração original de cinco maneiras: (1) Muitas vezes, foram implementadas em menos tempo do que o previsto na avaliação: instalação de poços e bicas em comunidades rurais, amplas campanhas de distribuição de variedades melhoradas de sementes e mudas; e, em certos casos, aquisição de terras para redistribuição. Isso aconteceu em face de um quadro geral de *demoras* na execução, que efetivamente haviam levado o Banco a prolongar o prazo de execução, de cinco anos nos projetos da primeira geração para mais de oito anos nos da segunda. O prolongamento dos períodos de execução, embora aparentemente mais apropriado para tarefas difíceis como, por exemplo, o fortalecimento institucional, efetivamente *privaram* os projetos de certas pressões e incentivos que estavam muito claramente presentes no ambiente dos projetos com bom desempenho.

(2) Os projetos com melhor desempenho acabaram constituindo uma versão muito *mais estreita* do que havia sido previsto na avaliação, com um ou dois componentes guindados a uma posição proeminente. Gozavam de especial favor o abastecimento rural de água, a participação comunitária e as atividades de distribuição de terras. Essa "reinvenção" foi possível porque (a) um governador simpatizante escolhia um dos componentes do projeto como a "marca registrada" da sua atividade; (b) os gerentes de projetos gravitavam para *os seus* componentes prediletos; (c) transferências demoradas ou insuficientes de fundos de contrapartida — que foi, contudo, um problema sério durante toda a implementação — causavam suficiente confusão nos orçamentos para dar aos administradores dos projetos liberdade para remodelá-los conforme o seu gosto e reduzi-los a proporções mais manejáveis.

(3) A relativa *facilidade* (ou dificuldade) das tarefas que os projetos atribuíam às entidades executoras influenciava a sua capacidade de ter bom desempenho. As repartições de águas constatavam, por exemplo, que o abastecimento rural era mais fácil do que a irrigação porque a água requeria menos análise intensiva e dependia menos de pessoas fora do seu controle, vale dizer, outras repartições e usuários. Isso explica por que o desenho e instalação de sistemas rurais de água saíam-se tipicamente melhor do que a irrigação, assim como por que a nova repartição rural de água de Sergipe teve bom desempenho no abastecimento rural e posteriormente mostrou deficiência em irrigação. Ademais, as metas e padrões dos próprios projetos tornam mais difíceis ou insatisfatórias as tarefas de certas repartições, como no caso da reorientação de serviços do setor público para os pobres, no desejo de fazer uso de tecnologias menos intensivas de capital para infra-estrutura e — refletindo em parte esse último aspecto — no empenho de reduzir os custos unitários e atingir um número maior de pessoas.

(4) Quando o desempenho era bom, a administração do projeto havia sido submetida a *pressões* claramente identificáveis da "demanda" externa, para produzir resultados, atingir um número significativo de pessoas, reduzir os custos ou portar-se com responsabilidade em outros aspectos. Essas pressões eram exercidas não só pelos beneficiários, como também por governadores, outras entidades estaduais, bancos de desenvolvimento, governos municipais, organizações não-governamentais e o Banco Mundial. A manifestação local dessas pressões contribui para explicar por que entidades medíocres por vezes produziam surtos surpreendentes de bom desempenho; a falta ou retirada

dessas pressões ajuda também a explicar por que repartições já tidas em boa conta subitamente passavam a ter mau desempenho.

(5) A repartições com bom desempenho via de regra *"assumiam"* tarefas das entidades que deveriam executá-las. *Primeiro*, os excelentes administradores públicos que se deixaram atrair para as unidades coordenadoras de projetos não estavam interessados em "meramente" coordenar o trabalho de outras entidades, mas queriam "fazer a coisa andar" eles mesmos. *Segundo*, os administradores assumiam tarefas por frustração com as delongas ou o trabalho relaxado da entidade executora designada; "tomar o comando" dava-lhes o controle que desejavam sobre o ritmo, a qualidade e o custo da execução do projeto e tornava o seu trabalho menos vulnerável à incerteza e à má vontade. *Terceiro*, governadores poderosos e compreensivos, impacientes com a "falta de resultados" das repartições estabelecidas, algumas vezes ajudavam a dar aos gerentes de projeto as desculpas e os recursos financeiros necessários para tomar as rédeas das outras entidades.

Como foi possível, num ambiente institucionalmente "subdesenvolvido", que entidades sem experiência em dada tarefa simplesmente assumissem a responsabilidade das repartições estabelecidas e executassem um trabalho razoável? *Primeiro*, elas algumas vezes desobedeciam as regras do projeto e contratavam a execução do trabalho com outras entidades públicas que não as designadas, com empresas privadas ou com organizações não-governamentais. O seu sucesso era maior quando faziam funcionar outras repartições, ou, noutras palavras, *não* quando estavam "coordenando" essas repartições, mas quando tinham poderes para contratar ou forçar as repartições a fazer o que era necessário. *Segundo*, quando uma unidade de projeto ou outra repartição prodigalizava sua atenção e seus escassos recursos ao componente que melhor podia administrar, isso reduzia para ela a complexidade e dificuldade do projeto. *Terceiro*, as repartições que assumiam *gostavam* das tarefas de que a entidade estabelecida não gostava; isso lhes dava e a seu pessoal a vantagem de uma alta motivação, que muitas vezes se mostrava mais importante para o bom desempenho do que uma longa experiência com a atividade em questão. *Quarto*, dado o fluxo e refluxo de profissionais do setor público entre repartições, a entidade que assumia podia contar com a perícia de *todos* os profissionais do setor público — obtendo muitas vezes o concurso de um especialista da própria repartição alijada. De fato, a criação de um *pool* desses peritos no setor público do Nordeste teria sido uma das mais importantes contribuições dos projetos da região — aspecto não totalmente apreciado justamente por constituir uma externalidade que, por isso mesmo, não é capturada na avaliação de qualquer repartição "instável" em particular.

O fenômeno da tomada do comando e sua associação à melhoria do desempenho contribui para esclarecer o problema do trabalho com repartições estabelecidas face à criação de novas. Aprendendo com a experiência do passado, o Banco e os brasileiros decidiram trabalhar em projetos no Nordeste por intermédio de repartições *estabelecidas* — criando a partir do nada apenas "modestas" unidades coordenadoras de projetos, que não tinham funções executivas. A história dessas tomadas de comando, contudo, muitas vezes mostrava ocorrências de bom desempenho de repartições *não* estabelecidas ou especializadas em determinada atividade, e *não* designadas originariamente para executar o componente — assim como de administradores dinâmicos que *não* queriam desempenhar "modestos" papéis de coordenação. A importância da tomada do comando ajuda também a explicar por que havia tanta insatisfação com a extensão, o crédito e a pesquisa agrícolas: tais componentes eram simplesmente mais difíceis de assumir do que os outros. Finalmente, nem sempre a tomada do comando foi acompanhada de um bom desempenho, e nem sempre as entidades estabelecidas designadas na avaliação tiveram fraco desempenho. Ao contrário, houve um número de casos de associação entre a tomada do comando e o bom desempenho suficiente para chamar atenção e requerer explicação.

Mobilização de Recursos Adicionais (Capítulo 3)

Os projetos, ou partes deles, com melhores desempenhos muitas vezes deram ensejo à mobilização de recursos adicionais, acima e além do que se esperava na avaliação, por governadores, administradores, secretarias estaduais, prefeitos, bancos ou pelos próprios beneficiários. Essas iniciativas mobilizadoras de recursos merecem maior atenção por terem ocorrido numa época de extrema austeridade fiscal no Brasil, quando simplesmente conseguir do governo a liberação de recursos de contrapartida para os projetos já era difícil, mais ainda quando se tratava de recursos *adicionais* não previstos. Seguem-se três exemplos dessa mobilização de recursos.

(1) Um fundo estadual de empréstimos para projetos de obras municipais resultou numa espécie de contribuição informal de melhoria, na forma de terras, material e cercas. (2) A imposição pelo Banco de um custo máximo por hectare para irrigação com poços artesianos e ribeirinha resultou na imprevista doação de terras para pequena irrigação por prefeituras e fazendeiros privados, numa forma inovadora de partilha de custos. (3) Uma confortável margem entre o rendimento pago pelos bancos rurais sobre depósitos e os lucros por eles obtidos em empréstimos levou a uma agressiva mobilização de depósitos por aqueles bancos *assim como* aumentou os empréstimos a pequenos agricultores. É interessante notar que nenhum dos incentivos à

mobilização de recursos adicionais nesses casos foi intencional, embora não haja razão para que não possam ser.

Uma parcela considerável desses recursos adicionais procedeu das prefeituras. Estas, contudo, não tinham participação formal nos projetos do Nordeste, pelo fato de serem geralmente consideradas como falidas, clientelistas e tecnicamente inadequadas, como é freqüentemente o que ocorre. Em cada categoria de exemplos, certos casos envolveram projetos no Nordeste, outros envolveram projetos entrelaçados com projetos no Nordeste e alguns não tinham envolvimento algum com tais projetos, embora fossem muito parecidas as características de desenho e o local de execução. Ademais, a maneira pela qual as prefeituras foram atraídas para a mobilização de recursos veio a transformá-las numa fonte de sadia pressão externa no sentido de que as repartições *estaduais* se portassem com responsabilidade, executassem o seu trabalho pontualmente, contivessem os custos e utilizassem padrões menos sofisticados e intensivos de capital. Os quadros do banco procuraram, muitas vezes infrutiferamente, realizar a mesma coisa.

A preocupação do Banco quanto à mobilização de recursos concentrou-se quase exclusivamente em conseguir a promessa de financiamento de contrapartida *antes* que os projetos começassem e em conduzir *démarches* junto aos governos federal e estaduais para que o financiamento prometido fosse liberado durante a execução. Os recursos adicionais mobilizados nesses casos *não* eram comprometidos antecipadamente: resultavam de uma estrutura de incentivos pela qual era vantajoso para as instituições e os indivíduos contribuir *depois* que as coisas estavam em marcha — e de uma forma que não fomentasse a inflação ou o déficit fiscal. Ademais, pesquisas patrocinadas pelo Banco, entre outras, demonstraram que a mobilização de poupança rural é crítica para o desenvolvimento de *instituições financeiras rurais* fortes, que são, por sua vez, críticas para o próprio desenvolvimento agropecuário. Os projetos de desenvolvimento agrícola e rural do Banco, no entanto, não vinculavam a provisão de crédito à mobilização de depósitos, vínculo esse que poderia também ajudar a resolver o problema das taxas de juros excessivamente subsidiadas.

A Questão da Terra (Capítulo 4)

Podem-se tirar importantes lições sobre a questão da terra da agregação (1) dos casos mencionados de mobilização adicional de recursos em terras, (2) de certos aspectos da reforma agrária e colonização na Bahia, no Ceará e no Maranhão, e (3) de uma bem-sucedida experiência de compra de terras e colonização cooperativa em Sergipe. Verificaram-se algumas variações entre esses casos, no tocante às características da posse da terra e à disponibilidade de terras para desapropriação ou compra. Observaram-se, contudo, certos temas comuns entre esses casos tão diferentes, mostrando um enfoque da colonização de terras mais barato, mais rápido, mais descentralizado, mais apoiado na participação dos colonos, menos antagonístico do que a desapropriação e mais viável do ponto de vista econômico.

Primeiro, os mercados de terras davam melhores resultados para os pequenos fazendeiros quando organizações (cooperativas, sindicatos, governo local) e beneficiários da comunidade participavam na procura de terrenos, na decisão de adquiri-los e no estabelecimento do seu preço. *Segundo*, esse enfoque mais descentralizado introduziu certa proteção contra conluios entre grandes proprietários de terras e o estado. *Terceiro*, muitos casos de transferência bem-sucedida de terras (e de desenvolvimento agrícola bem-sucedido) verificaram-se na orla de "fronteiras internas", em regiões *já colonizadas*, onde o mercado prometia visíveis retornos com a intensificação da agricultura nos cultivos de pequenas fazendas: tomate em Ibiapaba, laranja em Sergipe, hortaliças irrigadas na região de Irecê, na Bahia. Esse aspecto em particular contrasta com a suposição costumeira de que o aumento dos valores da terra em conseqüência do desenvolvimento e da intensificação do seu uso torna *menos* possíveis as atividades de transferência de terras. *Quarto*, nas regiões mais colonizadas, verificaram-se oportunidades de transferência em "trechos", mais do que nos grandes blocos que os planejadores de projetos de colonização geralmente têm em vista. *Quinto*, os administradores de projetos mais dedicados sentiram-se altamente motivados a fazer operar os mercados de terras e outros mecanismos de uma forma que "produzisse" parcelas de terra a baixo custo ou sem custo algum, pelo fato de que (a) a desapropriação de parcelas de menos de 500 hectares não era permitida por lei, razão pela qual a compra ou a aquisição por doação passava a ser a única opção disponível para adquirir parcelas menores, e (b) havia mais recursos disponíveis para financiar investimentos de infra-estrutura e serviços agrícolas do que para adquirir terras (por desapropriação *ou* compra). *Sexto*, a pequena irrigação privada associada à produção agrícola de alto valor era uma característica notável de muitos dos casos examinados.

As lições desses casos parecem indicar que as possibilidades de transferência de terras a agricultores sem terra são maiores do que as sugeridas pelo *Relatório sobre o Desenvolvimento Mundial* de 1990, dedicado à pobreza. Ademais, têm particular relevância em virtude do novo enfoque dado por aquele relatório à "infra-estrutura rural" como meio de fomentar o desenvolvimento rural eqüitativo. Assim é que, nos casos mais bem-sucedidos acima descritos, repartições de projetos vincularam estritamente a provisão de estradas e irrigação ao processo de aquisição de terras e sua transferência a pequenos agricultores. O projeto de Ibiapaba foi uma exceção, proporcionando estradas e eletrificação sem assegurar a distribuição de terras e contribuin-

do para que a desigualdade na posse da terra se tornasse ainda maior do que antes do projeto.

Pesquisa, Extensão e Desenvolvimento Agrícola (Capítulo 5)

Durante os episódios de distribuição bem-sucedida de variedades melhoradas, a *natureza da tarefa e do ambiente* encontrado pelas entidades executoras era marcadamente diferente do que elas faziam em outras épocas. A crônica impossibilidade de colaboração entre a pesquisa e a extensão desapareceu, ou verificou-se que *não* era necessária a coordenação entre pesquisa e extensão para que houvesse adaptação e disseminação. Muitos dos episódios tiveram origem em "campanhas" contra doenças e pragas das culturas — a broca do algodão nos estados algodoeiros, a doença da laranja em Sergipe, o fungo da bananeira na Paraíba — e trouxeram as seguintes transformações ao ambiente de trabalho da pesquisa e da extensão:

(1) A atenção estava concentrada num *único cultivo* ou num *único problema* daquele cultivo. (2) Os resultados eram claramente *mensuráveis*, as penas pelo desempenho fraco eram altas e o desempenho era julgado em termos de *resultados* (p. ex., redução dos níveis de incidência de pragas, número de plantas doentes erradicadas). (3) Freqüentemente, estavam presentes "reclamadores" poderosos a clamar em altos brados por resultados: governadores, diretores de outras repartições, altos funcionários preocupados com o grave impacto da possível quebra de safras sobre as receitas fiscais do estado e sobre a economia agrícola da região. (4) A tarefa tinha *um começo e um fim claros*, geralmente dentro do quadriênio do mandato de um governador e por vezes mesmo dentro do ciclo de cultivo de um ano — situando-se, noutras palavras, bem dentro dos oito anos do período de vida dos projetos de DR. (5) O intenso esforço do setor público mobilizado em torno de dada cultura em determinada região e por um período limitado de tempo assegurava o *suprimento sem atrito de insumos melhorados*, que era tão problemático em fases mais rotineiras; a redução das incertezas quanto aos insumos e à oferta, por sua vez, tornava a adoção mais atraente para os agricultores. (6) A própria *repartição* sentia-se cheia de energia e infundida de um sentido de missão, pelo fato de ter de trabalhar com um problema tão dramático e concreto, com resultados potencialmente grandes e previsíveis. (7) O *bairrismo* desempenhou importante papel propulsor em muitos desses casos de disseminação agrícola e, em sentido mais amplo, de desenvolvimento micro-regional. Embora esta lista de características possa parecer um aspecto peculiar das campanhas de combate a pragas e doenças, verificou-se que vários outros episódios de bom desempenho em atividades de extensão e pesquisa tinham pelo menos algumas daquelas mesmas características.

As características mencionadas marcam um contraste acentuado com o trabalho costumeiro de extensão e pesquisa. Via de regra, (1) o desempenho é medido em termos de *resultados* — número de fazendeiros visitados, número de cursos dados, número de lotes de demonstração — face a resultados tais como as taxas de adoção de variedades melhoradas ou os aumentos de rendimento obtidos; (2) as repartições seguem uma *ampla* agenda de cultivos e atividades, por períodos de tempo *sem limites*, sem urgência no tocante à introdução de tal ou qual variedade ou prática melhorada em particular; (3) freqüentemente, nem o setor privado nem o setor público tem condições para oferecer os insumos melhorados sem atritos, de uma forma oportuna e a um custo razoável — reduzindo assim os rendimentos a serem obtidos pela sua adoção. As campanhas contra doenças e outros episódios de desempenho melhor redefiniram a tarefa da extensão e da pesquisa de tal forma que tornou possível obter um desempenho bom das mesmas repartições que não se haviam saído bem com uma agenda muito mais ampla.

Conclusões e Recomendações

Os projetos tinham melhor desempenho quando (1) havia maior controle por parte das repartições sobre a qualidade e o ritmo de execução, por elas adquirido, em parte por levarem a cabo tarefas que pertenciam, a rigor, a outras repartições — ou contratando a sua execução e supervisionando-as; (2) as tarefas do projeto eram particularmente "fáceis", as novas repartições e unidades podiam "experimentar a mão" em tarefas iniciais fáceis, ou o projeto era modificado de tal forma que as tarefas difíceis se tornavam mais fáceis; (3) os incentivos eram tais que possibilitavam levantar financiamento adicional de governos ou beneficiários, no curso da execução e de uma forma que resultava em projetos de melhor qualidade; (4) as repartições eram sujeitas a pressões externas no sentido de se portarem com responsabilidade, e particularmente as pressões exercidas pelos "reclamadores"; e (5) verificava-se uma combinação complementar fora do comum da ação do estado e do governo local — com a participação deste último ajudando a reduzir os custos e a demora, a tornar as repartições estaduais mais responsáveis e a gerar uma utilização maior de material e mão-de-obra locais.

Embora a importância das *pressões da demanda* no tocante à indução de um desempenho bom não seja um achado recente, o Banco e outros doadores costumam enfocar a formulação de projetos por um prisma "ofertista" — dedicando-se principalmente ao fortalecimento da capacidade de determinadas repartições. Muito embora possa parecer que a área da demanda esteja fora do alcance do pessoal do projeto, a experiência analisada oferece numerosos exemplos da forma pela qual as repartições poderiam

ficar sujeitas a esses tipos de pressões da demanda. Em particular, oferecem-se duas sugestões:

• Os "bons" governadores e outros líderes eleitos poderiam ser mais inspirados a apoiar projetos pela divisão dos períodos de planejamento e execução em ciclos quadrienais que coincidissem com o ciclo eleitoral. Poder-se-ia permitir que esses líderes fizessem a sua escolha de um "cardápio" de possíveis atividades que teriam apoio do Banco — que é, afinal, o que fizeram muitos governadores, apoiando apenas os componentes de que mais gostavam e, por vezes, levantando recursos adicionais para financiá-los. Seria necessário que houvesse suficiente flexibilidade para que um estado escolhesse abastecimento rural de água e outro, crédito para pequenos fazendeiros — tal como fizeram os governadores de Sergipe e Pernambuco, respectivamente. Isso contrasta com a formulação atual de projetos, em que, face ao grande número de componentes e aos longos períodos de execução, os líderes eleitos perdem o interesse ou usam os recursos do projeto simplesmente para atender a necessidades orçamentárias de curto prazo ou saldar débitos políticos.

• As entidades executoras devem ser submetidas a "choques" de demanda, mediante a canalização de parte do seu financiamento através dos "usuários" dos seus serviços — não somente os grupos beneficiados, como também outras entidades públicas, bancos de desenvolvimento e prefeituras. Assim como os administradores que assumiram os projetos contratavam a execução daquilo que não podiam executar eles mesmos ou levar a entidade executora a fazê-lo, os reclamadores "contratariam" os serviços de entidades fornecedoras. Ademais, o financiamento de entidades fornecedoras através dos usuários introduziria no ambiente do projeto as características dos casos bem-sucedidos: tarefas estreitamente especificadas, padrões claros e mensuráveis de desempenho e claras penas em caso de descumprimento.

A escolha de atividades a serem financiadas e a sua consignação a determinadas repartições devem ser feitas parcialmente de acordo com a sua *facilidade e dificuldade* relativa. Seriam exemplos de possíveis tarefas "mais fáceis" — pelo menos no começo — as campanhas de combate a epidemias de doenças e pragas das culturas, a instalação de sistemas simples de abastecimento rural de água e certas formas de aquisição de terras. Ademais, dado o aparecimento de um novo interesse pela infra-estrutura rural, será preciso reconhecer que as repartições de infra-estrutura estabelecidas muitas vezes têm desempenho inexpressivo em tarefas a elas atribuídas por projetos do Banco desse tipo; outras, com experiência menor ou menos pessoal especializado, muitas vezes têm melhor desempenho. Isso parece indicar que, em certos casos, tais atividades devem ser transferidas das respectivas moradias burocráticas, talvez apenas temporariamente, para repartições ou mesmo novas unidades "impróprias" — se, por simpatia e pressões externas, estas unidades forem mais motivadas a sair-se bem.

Com referência às lições a serem tiradas da experiência da *tomada de comando* em geral, (1) dever-se-ia dar a uma *única* repartição poder exclusivo sobre o projeto, sejam as tarefas pouco ou muito numerosas, ou quer se trate de uma repartição ou de uma unidade coordenadora; e (2) aquela entidade única deveria receber os recursos políticos e financeiros para executar ela mesma as tarefas do projeto ou contratar a sua execução — com outras entidades públicas, empresas particulares ou organizações não-governamentais. Noutras palavras, a lição da experiência da tomada de comando *não* é a de que (1) o Banco deveria reverter à criação de poderosas entidades parestatais, *nem* a de que (2) se deveria conferir necessariamente às unidades de projetos (em face de outras repartições) poderes para levá-los a cabo por seus próprios meios; *nem* a de que (3) o número de tarefas deveria ser simplesmente reduzido — o que, contudo, não seria mau para começar.

Com base nas constatações acima enunciadas, são bastante claras as conclusões operativas referentes às atividades de *pesquisa e extensão*. (1) Os projetos deveriam favorecer cultivos únicos ou outras intervenções altamente concentradas, que tivessem começo e fim claros, e que tendessem a dar *resultados* mensuráveis. O tipo de apoio de espectro amplo dado atualmente, embora seja mais consentâneo com a ênfase atribuída mais recentemente à pesquisa de *sistemas* de agricultura, é também oneroso do ponto de vista da organização. Esse tipo de apoio é mais apropriado em projetos dedicados ao fortalecimento de uma *única* repartição durante um longo período de tempo — como o bem-sucedido apoio dado pelo Banco por muitos anos à entidade parestatal brasileira de pesquisas agropecuárias, EMBRAPA. (2) Os projetos deveriam financiar atividades de pesquisa e extensão, pelo menos parcialmente, através de "reclamadores", porque estes dão mais valor às aplicações práticas e à disseminação do que o fazem as entidades de pesquisa. (3) Os projetos deveriam financiar os centros de pesquisa, para uma disseminação mais ampla de um ou dois dos seus sucessos favoritos.

De modo geral, o Banco deveria: (1) dar um enfoque mais "urbano" aos seus projetos rurais — como faz nos seus projetos de "cidades intermediárias" no Brasil e noutros países — valendo-se de verbas de contrapartida e outros incentivos para (a) captar os recursos e a capacidade empresarial de desenvolvimento disponíveis no plano local e (b) situar certas funções a um nível no qual dessem melhores resultados; (2) dar mais atenção à vinculação do crédito a pequenos fazendeiros com a mobilização de poupança rural, que pode necessitar de projetos concentrados exclusivamente em instituições financeiras rurais e, por

isso mesmo, *não* inerentes a projetos de desenvolvimento agropecuário; e (3) considerar uma infinidade de possibilidades de exercer uma mediação mais descentralizada na transferência de terras a pequenos fazendeiros para a prática de uma agricultura produtiva, particularmente em combinação com a provisão de estradas e água para irrigação.

Notas

1. Comentando uma versão preliminar deste relatório, a Secretaria de Desenvolvimento Regional da Presidência acentuou que o trabalho não segue o enfoque usual usado pelo Banco Mundial na análise dos projetos que financia. Como se explica no texto, este estudo, intencionalmente, *não* é uma avaliação dos projetos do Nordeste, os quais, porém, examinou com vistas para uma questão particular e com a preocupação de chegar a conclusões de utilidade geral fora do DR e do Banco. A Secretaria teria desejado também um tratamento mais amplo dos vários problemas (o contexto econômico, político, social e cultural da região e do país; a relação entre o exame das tomadas de comando e os problemas de administração e de alocação de recursos entre os componentes; a relação do bom comportamento com diferentes grupos sociais, tais como senhores de terras, posseiros, parceiros e arrendatários; a relação dos sucessos de cultivos únicos com problemas de distribuição ao mercado, informação sobre quais projetos saíram-se bem em termos de uso de uma proporção menor da suas tarefas em administração). Não poderíamos deixar de concordar que tais temas merecem um tratamento muito mais completo, mas não pudemos realizá-lo em virtude de limitações de tempo, recursos financeiros e extensão do relatório final. Concordamos em que tais questões são importantes, e confirmaríamos a necessidade de um trabalho mais amplo de avaliação, como sugere a Secretaria, dos projetos conjuntos do Banco Mundial e do Governo do Brasil no Nordeste. A Secretaria teria desejado ver também uma pesquisa sobre os componentes nos quais a coordenação entre repartições *não* deu bons resultados. De fato, neste relatório, não fizemos a análise detalhada de componentes que tiveram desempenho fraco, em parte pelo fato de o termos feito em termos mais gerais em outros estudos de avaliação, particularmente o relatório de 1988 do OED, sobre a experiência de DR (em todo o mundo). Em maior consonância com a posição da Secretaria, este relatório descreve o que deu bons resultados no contexto dos tipos mais freqüentes de malogro — por exemplo, da provisão oportuna de crédito para plantio, da colaboração entre extensão e pesquisa, da execução pontual de componentes dos projetos. Diversos PPAR preparados pelo OED analisaram problemas individuais de projetos. Este trabalho não substitui uma avaliação da carteira de projetos nem é um estudo do Nordeste do Brasil; antes, faz uso de uma amostra excepcionalmente grande de projetos interrelacionados para oferecer ao Banco e aos economistas do desenvolvimento em geral indicações sobre a elaboração eficiente de projetos para levar assistência às populações rurais pobres. Encontra-se no Anexo I o texto completo dos comentários do Governo.

2. Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe e Minas Gerais. Ver na nota 3 do parágrafo 1.07 uma explicação da inclusão do Estado de Minas Gerais, não situado na região, nos projetos do "Nordeste".

3. A Região assinala que a "segunda geração" de projetos ha sido reformulada. As lições extraídas deste relatório foram tiradas de projetos de primeira e segunda geração, na forma em que foram originalmente implementados. A Região comentou também que, como "a implementação da 'segunda geração' acha-se, quando muito, no seu ponto médio, e foi muito distorcida por problemas de financiamento, as conclusões tiradas com base na experiência daquela geração de modo geral não estão relacionadas com a formulação dos projetos".

4. Apoio para Pequenas Comunidades Rurais.

Resumen

En 1974, como parte de un programa más amplio orientado a la reducción de la pobreza en general, el Banco anunció un nuevo enfoque bien definido para reducir la pobreza en el medio rural y estimular el crecimiento agrícola. Los proyectos de desarrollo rural (DR) del "nuevo estilo"—nacidos del rendimiento poco satisfactorio de los anteriores esfuerzos por reducir la pobreza y la inequidad en dicho medio—complementaban los proyectos previos y diferían de ellos en dos formas: estaban directamente focalizados a los pobres con la prestación de servicios y subsidios a la producción agrícola, y proporcionaban a ciertas regiones una serie completa de inversiones con fines de desarrollo, que comprendían desde caminos hasta crédito agrícola y salud, escogiéndose las regiones en razón de su potencial agrícola y su alta concentración de agricultores de pequeña escala. En 1986, es decir 12 años más tarde y luego de que el Banco había hecho compromisos por valor de US$19.100 millones (corrientes) para el desarrollo rural en todo el mundo—suma de la cual US$6.300 millones se habían destinado a proyectos de desarrollo subregional de "nuevo estilo"—el nuevo enfoque había caído en desuso. La ejecución de los proyectos había estado plagada de problemas y se habían planteado serias dudas acerca de su eficacia para reducir la pobreza y aumentar la productividad agrícola. Estas preocupaciones, que se describen a continuación, se expusieron en un importante estudio de la experiencia en materia de desarrollo rural llevado a cabo por el Departamento de Evaluación de Operaciones (DEO) en 1987.

Aunque el desarrollo rural focalizado merecía muchas de las críticas recibidas, algunos de los proyectos, o partes de ellos, tuvieron buenos resultados. Si bien las excepciones por sí mismas no justifican que se vuelva a esta forma de desarrollo rural, plantean la cuestión de cómo algunos proyectos pudieron haberse desempeñado bien con un diseño y en un medio que ahora no se consideran propicios para obtener buenos resultados. Expresado de manera más constructiva, si algunos proyectos y actividades pudieron ponerse a prueba en tales condiciones adversas, ciertamente deben tener experiencias que ofrecer para mejorar el diseño de los programas de hoy en día. Por más que el Banco haya abandonado en general el enfoque de desarrollo rural de "nuevo estilo", continúa dedicando una atención importante, a nivel tanto de políticas como de recursos, a todos los mismos sectores—individualmente o en parejas—que estuvieron unidos en los proyectos de desarrollo rural: investigación agrícola, extensión, finanzas para los medios rurales, riego, caminos de las explotaciones a los mercados, agua potable, salud y educación.

Puesto que las evaluaciones pasadas de la experiencia del desarrollo rural han sido más ilustrativas de las causas del fracaso que del éxito—como lo puntualizó el propio examen del DEO antes mencionado—han arrojado más luz sobre *qué no hacer* y no sobre *qué hacer*. Este estudio persigue la finalidad contraria. Identifica las tendencias que fueron comunes a una variedad de casos de mejor rendimiento en un conjunto de 23 proyectos de desarrollo rural en el Nordeste del Brasil, uno de los programas más amplios que el Banco haya realizado en este campo. El interrogante en este estudio es cuáles son las experiencias de buen rendimiento que estas tendencias revelan acerca del diseño de los proyectos y, de modo más general, acerca de la función del sector público en el desarrollo rural.[1] Como podrá ver el lector, las respuestas a esta pregunta no constituyen argumentación en favor ni en contra del "desarrollo rural integrado", pero tienen relación con una amplia variedad de proyectos y sectores en los cuales opera actualmente el Banco. Como se señala en la nota 1 y en el Anexo 1, el gobierno del Brasil se ha preocupado de que los lectores no tomen de ninguna manera este estudio como sustitutivo de una evaluación de la cartera de proyectos de desarrollo rural en conjunto.

Varios problemas han aquejado a ciertos tipos de proyectos del Banco en materia de desarrollo rural en todo el

mundo, incluidos los del Nordeste del Brasil: (1) demasiados componentes y una complejidad excesiva; (2) falta de conjuntos técnicos sobre aumento de la productividad para los pequeños agricultores; (3) falta de participación de los beneficiarios en la formulación y la ejecución de los proyectos; y (4) un ambiente de políticas que no ha sido favorable a la agricultura. Los proyectos del Nordeste han sufrido, además, de (1) demoras crónicas en la transferencia de los fondos brasileños de contrapartida para las unidades de cada proyecto y los organismos de ejecución, y (2) altas y crecientes tasas de inflación (de hasta tres dígitos) y, por ende, de la crisis fiscal que afectó al Brasil en los años ochenta. Este estudio se pregunta por qué a veces ciertos proyectos u organismos estuvieron exentos de estos problemas, o cómo pudieron tener buenos resultados a pesar de tales condiciones adversas.

Los Proyectos del Nordeste

Entre 1975 y 1987, el gobierno del Brasil comprometió US$3.300 millones para 22 proyectos de desarrollo rural integrado en los diez estados de la región del Nordeste del Brasil[2] y un proyecto de tenencia de la tierra en toda la región, suma de la cual el Banco financió el 42 por ciento, es decir US$1.400 millones. Una "primera generación" de estos proyectos incluyó aproximadamente una docena de componentes, entre ellos los de crédito agrícola, servicios de extensión, caminos de acceso, electrificación, salud y educación, aunque no todos estos componentes estaban comprendidos necesariamente en cada proyecto. Los elementos principales de cada proyecto eran los siguientes: crédito (23 por ciento), caminos de acceso (20 por ciento), actividades vinculadas a la tierra (16 por ciento) y extensión agrícola (14 por ciento), representando el 72 por ciento de los costos evaluados inicialmente. En una segunda generación de proyectos y en un intento por reducir su complejidad y centrar la atención más exclusivamente en la producción agrícola, se eliminaron los componentes de salud, educación y caminos, y otros más pequeños. El crédito (30 por ciento), la extensión (24 por ciento) y un nuevo componente de participación de la comunidad (16 por ciento) representaron el 70 por ciento de los gastos indicados por las proyecciones en la evaluación inicial; las actividades afines relacionadas con la tierra fueron unificadas por separado en un proyecto de tenencia de la tierra en toda la región (16 por ciento).[3]

La organización típica de un proyecto comprendía al Banco y varios niveles del gobierno brasileño, a saber, ministerios del gobierno federal, la autoridad de desarrollo regional del Nordeste, bancos semioficiales, y las unidades de los proyectos y organismos de ejecución en el nivel estatal. Las unidades coordinadoras de proyectos organizadas en los departamentos estatales de planificación o agricultura, se encárgaban de elaborar los programas anuales y de supervisar su ejecución, pero no tenían responsabilidades de ejecución ni facultades para donar fondos o para retenerlos de los organismos ejecutores, asunto del cual se trata en el Capítulo 2; una excepción a este respecto fueron los componentes de participación de la comunidad (APCR)[4] en los proyectos de segunda generación, que se describen seguidamente, en los cuales las unidades de los proyectos compartían responsabilidades formales de ejecución con los sindicatos de trabajadores rurales, los servicios de extensión y/o algunas cooperativas de agricultores. Los gobiernos municipales, aunque estaban representados con frecuencia en los consejos ad hoc que inspeccionaban los subproyectos de APCR, no tenían lugar oficial alguno en los proyectos como tales, pero en ocasiones llegaban a hacer contribuciones importantes que no se habían previsto de antemano (Capítulos 2 y 3).

El componente de participación de la comunidad, por valor de US$222 millones, representó uno de los intentos más importantes del Banco para dar un mayor carácter participatorio a la ejecución de sus proyectos de desarrollo rural. El fondo de APCR, con la asistencia de un promedio de 36 agentes de la comunidad y de personal supervisor por cada estado, hace donaciones de hasta US$10.000 a las asociaciones de comunidades de menos de 5.000 habitantes: (1) 65 por ciento para empresas de propiedad de la comunidad, como instalaciones de molienda de granos, bancos de semillas, almacenes abastecedores de insumos, e instalaciones de almacenamiento; (2) 25 por ciento para proyectos de obras pequeñas (reparación de caminos, lavanderías para la comunidad, retretes públicos); y (3) 15 por ciento para fortalecimiento institucional en las organizaciones comunitarias, utilizado principalmente por las federaciones de trabajadores rurales para fines de capacitación.

Buen Rendimiento (Capítulo 2)

Definir "éxito" o, más exactamente, "mejor rendimiento" resultó más difícil de lo previsto originalmente. Al comienzo del examen, los casos de mejor rendimiento *parecían* agruparse en tres categorías: (1) *proyectos* completos (Tabuleiros Sul en Sergipe, Ibiapaba en Ceará); (2) *componentes* (caminos, electrificación, agua potable, salud y educación versus crédito agrícola, investigación y extensión); y (3) *organismos* (la unidad del proyecto en Sergipe). Además, debido al descontento bastante difundido respecto del crédito agrícola, la investigación y la extensión, se identificaron también varios casos de diseminación exitosa de variedades mejoradas de semillas entre los pequeños agricultores, a fin de explorar por qué el rendimiento había sido tan diferente en estos casos (Capítulo 5).

Las tres categorías mencionadas—proyectos, componentes y organismos—no perduraron mucho. (1) Los

organismos que tuvieron mejor rendimiento no siempre siguieron teniéndolo (y algunos organismos mediocres se desempeñaron en ocasiones sorprendentemente bien); (2) a menudo el buen rendimiento se enmarcó en el período del mandato de un gobernador favorablemente dispuesto y exigente (por ejemplo, 1982-86 en Sergipe, y 1987-89 en Bahía, Maranhão y Pernambuco), asunto del que se trata en el Capítulo 2; (3) las altas calificaciones concedidas por muchos a las obras de infraestructura, la salud y la educación, a veces decían más acerca de cosas *distintas* de las repercusiones o del desempeño del organismo—por ejemplo, la visibilidad relativa de los resultados (nuevos caminos frente a variedades de semillas que aumentan la productividad), o la facilidad relativa de la tarea (instalación de sistemas de agua potable en los medios rurales frente a extensión agrícola), o el hecho de que la unidad del proyecto u otros organismos hayan tomado para sí algunas funciones de las instituciones de infraestructura debido a que éstas habían venido desempeñándose *inadecuadamente*, asunto al cual se refiere el Capítulo 2; y (4) aun cuando muchos observadores han dado calificaciones altas a las repercusiones en materia de salud y educación, en los informes de supervisión, estos componentes han obtenido calificaciones uniformemente bajas con respecto al desempeño de los organismos.

Para resumir, no hubo proyectos, componentes ni organismos que se pudiera decir habían rendido uniformemente bien a lo largo de todo el período objeto del examen, o uniformemente mejor que los otros proyectos, componentes u organismos. Se ha hablado de *episodios* de buen rendimiento en oposición a organismos, componentes y proyectos uniformemente "buenos". El intento por explicar los altibajos del rendimiento condujo a descubrir que con frecuencia el buen rendimiento tenía menos que ver con la *capacidad intrínseca* de un organismo que con un conjunto de otros factores, a saber: (1) la facilidad y dificultad de las tareas; (2) la presencia de presiones externas; (3) los incentivos intrínsecos del rendimiento; y (4) la intervención a nivel local de participantes y organizaciones profundamente interesados. Cuando una de estas variables cambiaba apreciablemente, el rendimiento iba de bueno a malo o viceversa. Dado que el diseño y la supervisión de los proyectos tendía a concentrarse en mejorar la capacidad intrínseca de los organismos, esta conclusión podría parecer que hacía aún más difícil la tarea del fortalecimiento institucional. Pero, a menudo, influir en estas variables no es más difícil que mejorar, desde adentro, la calidad de lo que los organismos hacen; en ocasiones es aún más fácil.

Unas cuantas advertencias sobre lo que este estudio *no* hace: Primera, como se explica en la nota 1, este estudio no analiza temas de políticas macroeconómicas, como la sobrevaloración de los tipos de cambio y otras políticas que afectan a las exportaciones agrícolas, o el subsidio del crédito agrícola y otros insumos. Segunda, el estudio no se propone juzgar la estrategia del gobierno brasileño ni la del Banco para el alivio de la pobreza en la región del Nordeste. Tercera, el estudio no es una evaluación de los proyectos del Nordeste, como tampoco del desarrollo rural integrado en general.

Reinvención de los Proyectos (Capítulo 2)

Las actividades de mejor rendimiento se apartaron uniformemente de su diseño original de cinco maneras: (1) Con frecuencia se ejecutaron en *menos tiempo* que el fijado al efecto en la evaluación inicial—la instalación de pozos y tomas de agua en las comunidades rurales, las campañas para distribuir ampliamente variedades mejoradas de semillas y rizomas y, en algunos casos, la adquisición de tierras para redistribución. Esto ocurrió con un trasfondo general de *demoras* en la ejecución, que realmente habían sido el motivo para que el Banco extendiese el período de ejecución de cinco años en los proyectos de primera generación a más de ocho años en los de segunda generación. Los períodos de ejecución más largos, aunque al parecer más apropiados para las difíciles tareas del fortalecimiento institucional, *privaron* en realidad a los proyectos de ciertas presiones e incentivos que estaban bastante presentes en el ámbito de los proyectos con buen rendimiento.

(2) Los proyectos con mejor rendimiento llegaron a término en una versión mucho *más reducida* de la que se previó en la evaluación inicial: uno o dos de los componentes originales ocuparon el centro de la atención. Los componentes favoritos eran el agua, la participación de la comunidad y las actividades de distribución de la tierra. Esta "reinvención" pudo ocurrir debido a lo siguiente: a) un gobernante favorablemente dispuesto escogía uno de los componentes del proyecto como su actividad preferida; b) los directores de los proyectos gravitaban en torno a los componentes favoritos *suyos*; y c) las deficiencias y demoras en la transferencia de fondos de contrapartida—si bien fueron un problema grave a lo largo de la ejecución—causaron trastornos en los presupuestos en grado suficiente para que los directores de los proyectos tuvieran libertad para remodelarlos a su gusto y reducirlos a proporciones más fáciles de manejar.

(3) La *facilidad* (o dificultad) relativa de las tareas comprendidas en los proyectos asignados a los organismos influyó en la capacidad de éstos para desempeñarse bien. Por ejemplo, las empresas de agua potable encontraron que el abastecimiento en las zonas rurales era más fácil que el riego, porque el agua estaba sometida a una menor intensidad de análisis y dependía menos de agentes externos que escapaban a su control, a saber, otras empresas y usuarios. Esto explica por qué el diseño y la instalación de sistemas de abastecimiento de agua en las zonas rurales funcionaron típicamente mejor que el riego, y también por

qué la nueva empresa de abastecimiento de agua de Sergipe se desempeñó bien en la distribución de agua en las zonas rurales, pero lo hizo luego deficientemente en el riego. Además, las metas y las normas de los propios proyectos hicieron las tareas más difíciles o poco satisfactorias para algunos organismos: la reorientación de los servicios del sector público hacia los pobres, el deseo de depender de tecnologías con menos uso de capital en obras de infraestructura y, en parte como reflejo de lo anterior, la preocupación por reducir los costos unitarios y beneficiar a un mayor número de personas.

(4) Cuando el rendimiento era bueno, la dirección del proyecto había estado sujeta a *presiones* externas de "demanda" claramente identificables para lograr que las cosas se hagan, llegar a un número apreciable de gente, reducir los costos, o responder en otras formas. Estas presiones venían no sólo de los beneficiarios, sino de los gobernadores, otros organismos estatales, bancos de desarrollo, gobiernos municipales, organizaciones no gubernamentales y el Banco Mundial. La entrada en escena de tales presiones ayuda a explicar por qué organismos mediocres a veces producían resultados sorprendentemente satisfactorios; en cambio, la falta o la eliminación de estas presiones, también contribuye a explicar la razón de que algunos organismos que se consideraban sólidos pasaron súbitamente a tener un desempeño deficiente.

(5) Los organismos que se desempeñaban mejor *asumían* rutinariamente algunas tareas de las entidades encargadas de llevarlas a cabo. *En primer lugar*, los excelentes administradores del sector público que se sintieron atraídos a las unidades de coordinación de los proyectos, no querían "meramente" coordinar las labores de otros organismos sino ejecutarlas ellos mismos. *En segundo lugar*, los administradores asumían las tareas como consecuencia de la frustración por la lentitud de las actividades o la mala calidad de los trabajos de los organismos ejecutores designados; la asunción de tareas les daba el control que deseaban sobre el ritmo, la calidad y el costo de la ejecución del proyecto, y hacía su trabajo menos vulnerable a la incertidumbre y la mala voluntad. *En tercer lugar*, los gobernadores poderosos y favorablemente dispuestos, impacientes ante la "falta de resultados" de los organismos establecidos, ayudaron en ocasiones a que los directores de los proyectos tuvieran excusas y medios para asumir tareas de otros organismos.

Cómo los organismos de un medio institucionalmente "subdesarrollado" y sin experiencia alguna en una tarea determinada podían simplemente haber asumido funciones de entidades ya establecidas y tenido un desempeño razonable? *Primero*, esos organismos contravinieron a veces las reglas del proyecto y contrataron la realización de trabajos con entidades públicas distintas de las designadas, o con empresas privadas o con organizaciones no gubernamentales; tuvieron el mejor de los éxitos en obtener que otras entidades realizaran las labores, en otras palabras, *no* cuando "coordinaban" a los organismos, sino cuando tenían facultades para contratar o para obligar a los organismos a hacer lo que se requería. *Segundo*, cuando una unidad de proyecto u otra entidad dedicaba su atención y sus escasos recursos a los componentes que podía administrar mejor, esto le beneficiaba al reducir la complejidad y la dificultad de los proyectos. *Tercero*, a los organismos que asumían funciones les agradaban las tareas que las entidades reconocidas cumplían a disgusto; esto daba a los primeros y a su personal la ventaja de una alta motivación, que con frecuencia resultaba ser más importante para un buen desempeño que una larga experiencia en una actividad. *Cuarto*, ya que los profesionales del sector público rotaban entre organismos, los que asumían funciones podían aprovechar la experiencia de *todos* los profesionales del sector público, al adscribir en comisión de servicio a un especialista, muy a menudo del propio organismo del cual se asumía la función en cuestión. En realidad, haber creado un núcleo de especialistas en el sector público del Nordeste puede ser una de las contribuciones más importantes de los proyectos de esa región, no apreciada de lleno precisamente por tratarse de una externalidad, no captada debido a ello, en la evaluación de un organismo "inestable" dado.

El fenómeno de la asunción de funciones, y su asociación con el mejor desempeño, arroja luz sobre el problema de trabajar con organismos reconocidos *versus* crear nuevos organismos. Sobre la base de experiencias pasadas, el Banco y los brasileños decidieron trabajar en los proyectos del Nordeste a través de organismos *reconocidos* y crear de la nada sólo una "modesta" unidad coordinadora de los proyectos, que no tuviera funciones ejecutivas. Pero el historial de asunción de funciones mostró también frecuentes casos de buen desempeño de organismos *no* reconocidos ni especializados en una actividad determinada y *no* designados originalmente para ejecutar un componente, así como de administradores dinámicos *no* deseosos de desempeñar "modestas" tareas de coordinación. La importancia de la asunción de funciones ayuda a explicar también por qué hubo tanto descontento respecto de la investigación, la extensión y el crédito agrícolas: sencillamente, estos componentes eran más difíciles de asumir que los otros. Por fin, la asunción de funciones no siempre estaba asociada al buen desempeño, y los organismos reconocidos designados en la evaluación inicial no siempre se desempeñaban deficientemente. Mejor dicho, la asunción de funciones y el buen desempeño estaban relacionados entre sí en casos suficientes para atraer la atención y requerir una explicación.

Movilización de Financiamiento Adicional (Capítulo 3)

Los proyectos de mejor rendimiento, o partes de los mismos, produjeron con frecuencia la movilización de recursos adicionales muy superiores a los esperados en la evaluación inicial, ya sea por los gobernadores, los directores de organismos, los ministerios de los gobiernos estatales, alcaldes y bancos, o los propios beneficiarios. Estas iniciativas de movilización de recursos merecen una detenida atención porque ocurrieron en una época de extremada austeridad fiscal en el Brasil, cuando era difícil que el gobierno de ese país aportara los fondos de contrapartida para los proyectos, mucho menos un financiamiento *adicional* no previsto de antemano. Se exponen seguidamente tres ejemplos de esta movilización de recursos.

(1) Un fondo estatal para préstamos destinados a proyectos de obras en las municipalidades trajo como consecuencia una especie de impuesto municipal informal de mejoras en forma de tierras, materiales y cercados. (2) Un tope fijado por el Banco sobre los costos por hectárea para riego fluvial y mediante pozos entubados condujo a una donación no prevista de tierras para riego de pequeña escala por parte de las municipalidades y agricultores privados en un acuerdo innovador de participación en los costos. (3) Un margen saludable entre la renta pagada por los bancos rurales sobre los depósitos y lo que esos percibían sobre sus préstamos condujo a una vigorosa movilización de los depósitos por los bancos rurales y a un aumento del crédito otorgado a los pequeños agricultores. Resulta interesante observar que ninguno de los incentivos de estos casos fue intencional, pero no hay razón para que no pudiera serlo.

Una parte apreciable de estos recursos adicionales provino de los gobiernos municipales. Sin embargo, ninguno tenía función oficial que desempeñar en los proyectos del Nordeste porque dichos gobiernos se consideran en general insolventes, inclinados en favor de los clientes, y técnicamente inadecuados, lo que a menudo es cierto. En cada categoría de los ejemplos, algunos casos correspondieron a proyectos del Nordeste, otros a proyectos distintos combinados con aquéllos, y unos pocos no correspondieron enteramente a los proyectos del Nordeste, aun cuando las características del diseño y el lugar de su ejecución fueron bastante similares. Además, la manera en que las municipalidades fueron atraídas a la movilización de recursos las transformó en una fuente de presión externa saludable sobre los organismos *estatales* para que se comportaran responsablemente, hicieran las cosas en forma oportuna, mantuvieran los costos en niveles bajos y usaran métodos menos complejos y con gran intensidad de capital. El personal del Banco había tratado, a menudo en vano, de conseguir el mismo resultado.

La preocupación del Banco acerca de la movilización de recursos se ha concentrado casi exclusivamente en asegurar el compromiso de dotación de fondos de contrapartida *antes* de que comiencen los proyectos, y en persuadir a los gobiernos federal y estatales a que den los fondos prometidos durante la ejecución. Los recursos adicionales movilizados en estos casos *no* se comprometieron de antemano: fueron el resultado de una estructura de incentivos que hicieron que valiera la pena, para instituciones e individuos por igual, contribuir *después* de que las cosas habían comenzado, y en forma de no acrecentar la inflación ni el déficit fiscal. Por otra parte, la investigación realizada bajo auspicios del Banco y de terceros ha demostrado que la movilización del ahorro rural tiene una importancia fundamental en el desarrollo de *instituciones financieras rurales* vigorosas, las cuales son a su vez de importancia clave para el propio desarrollo agrícola. Pero los proyectos agrícolas y de desarrollo rural del Banco no han vinculado el suministro de crédito a la movilización de los depósitos, vinculación que podía también ayudar a resolver el problema de los tipos de interés excesivamente subvencionados.

El Problema de la Tierra (Capítulo 4)

Algunas lecciones importantes acerca de la tierra surgen del acopio de (1) los casos antes mencionados de movilización adicional de recursos de tierras, (2) ciertos aspectos de la reforma agraria y la colonización en Bahía, Ceará y Maranhão, y (3) una exitosa experiencia de compra de tierras y colonización cooperativa en Sergipe. En todos estos casos hubo algunas variaciones en cuanto a las características de la tenencia de la tierra y su disponibilidad para fines de expropiación o compra. Sin embargo, aun cuando eran diferentes entre sí, todos los casos tenían en común algunos temas que señalaban un método de colonización de la tierra que era menos costoso, más rápido, más descentralizado, más dependiente de la participación de los colonos, menos controvertido que la expropiación, y económicamente más viable.

Primero, los mercados de tierras funcionaban mejor para los pequeños agricultores cuando las organizaciones locales (cooperativas, sindicatos, gobierno) participaban con los beneficiarios en la búsqueda de tierras, la decisión de adquirirlas, y la negociación de su precio. *Segundo*, este método más descentralizado introdujo algunos controles disuasivos de la colusión entre los terratenientes y el estado. *Tercero*, muchos casos de transferencia exitosa de la tierra (y de éxito del desarrollo agrícola) tuvieron lugar en el margen de las "fronteras internas" en regiones *ya colonizadas*, donde el mercado prometía claros ingresos provenientes de la intensificación de los cultivos de los pequeños agricultores: tomates en Ibiapaba, naranjas en Sergipe, y verduras de regadío en la región de Irecê de Bahía. Esta

característica peculiar contrasta con el criterio común de que el aumento del valor de la tierra que acompaña al desarrollo y la intensificación del uso de la tierra hacen *menos* posibles las transferencias de la tierra. *Cuarto*, las oportunidades de transferencia en las regiones más colonizadas ocurrieron en forma fragmentaria más bien que en grandes bloques, como preveían habitualmente los planificadores de proyectos de colonización. *Quinto*, los administradores dedicados a sus proyectos encontraron una alta motivación para hacer que los mercados de tierras y otros mecanismos funcionaran en forma tal que "produjeran" parcelas de tierra a bajo costo, o a ningún costo, porque: a) la ley no permitía la expropiación de parcelas de menos de 500 ha, por lo cual la compra o la adquisición mediante donación eran los únicos medios disponibles para adquirir parcelas más pequeñas; y b) se disponía de más financiamiento para inversiones en infraestructura y en servicios agrícolas que para adquisición de tierras (por expropiación *o* compra). *Sexto*, el riego privado de pequeña escala, asociado con la producción agrícola de alto valor, constituyó una característica notable de varios de los casos examinados.

Las enseñanzas derivadas de estos casos indican que las posibilidades de transferencia de la tierra a los agricultores privados de ella son mayores que las sugeridas en el *Informe sobre el Desarrollo Mundial 1990* sobre la pobreza. Dichas enseñanzas tienen también una especial pertinencia en relación con el nuevo enfoque de ese Informe sobre la "infraestructura rural" como medio de originar un desarrollo rural orientado a la equidad. En efecto, en el caso más exitoso de los descritos anteriormente, los organismos del proyecto vincularon estrictamente el suministro de caminos y riego al proceso de adquisición de tierras y su transferencia a pequeños agricultores. El proyecto de Ibiapaba fue una excepción: proporcionaba caminos y electrificación sin asegurar la distribución de la tierra, contribuyendo a que la falta de equidad en la tenencia se volviera peor de lo que fue antes del proyecto.

Investigación, Extensión, y Desarrollo Agrícola (Capítulo 5)

Durante los episodios de diseminación exitosa de variedades mejoradas; el *carácter de la tarea y el medio* a que debieron hacer frente los organismos de ejecución fueron notablemente diferentes de los prevalecientes en otros tiempos. La incapacidad crónica de los servicios de investigación y extensión para colaborar había desaparecido, o resultó que *no* era menester coordinar la extensión con la investigación para que ocurrieran la adaptación y la diseminación. Muchos de estos episodios tuvieron su origen en las "campañas" contra las enfermedades y las plagas de los cultivos—el escarabajo en los estados productores de algodón, la enfermedad del naranjo en Sergipe, y el hongo de la raíz del banano en Paraíba—y transformaron el ámbito de trabajo de la investigación y la extensión de las maneras que siguen.

(1) La atención se centraba en *un solo cultivo* o en *un solo problema* de ese cultivo. (2) Los resultados eran claramente *medibles*, las sanciones por el rendimiento deficiente eran severas, y el rendimiento se juzgaba en términos de *producción* (por ejemplo, niveles reducidos de incidencia de las plagas, número de plantas enfermas erradicadas). (3) Con frecuencia se hicieron presentes personas poderosas que *reclamaban* resultados: gobernadores, directores de otros organismos, alcaldes, asociaciones de agricultores, y funcionarios de alto nivel a quienes preocupaban los graves efectos de las posibles pérdidas de las cosechas en las recaudaciones tributarias del estado y en la economía agrícola de la región. (4) La tarea tenía un *principio y un final claros*, por lo general dentro de los cuatro años que dura el mandato de un gobernador y a veces aun dentro de un ciclo anual de cultivo, en otras palabras, perfectamente dentro de la duración de los proyectos de desarrollo rural, de entre cinco y ocho años. (5) El intenso esfuerzo del sector público movilizado alrededor del cultivo en una región determinada, y por un período de tiempo limitado, garantizó el *abastecimiento de insumos mejorados* ininterrumpido que fue tan problemático en tiempo más corriente, la menor incertidumbre en cuanto al abastecimiento de insumos, a su vez, hizo que la adopción resultara más atractiva para los pequeños agricultores. (6) El propio *organismo* se sintió vigorizado, infundido de un sentimiento de finalidad al tener un problema tan concreto y notable de que ocuparse, con resultados potencialmente grandes y previsibles. (7) El *partidismo* local desempeñó un papel importante en promover muchos de estos relatos de diseminación de la agricultura y, más ampliamente, de desarrollo microrregional. Aun cuando estos rasgos podrían parecer privativos de las campañas de erradicación de enfermedades y plagas, varios otros episodios de buen rendimiento resultaron tener por lo menos algunas de estas mismas características.

Las peculiaridades mencionadas contrastan pronunciadamente con aquellas bajo las cuales funcionan en general la extensión y la investigación. Típicamente: (1) el rendimiento se mide en términos de *insumos*—número de agricultores entrevistados, número de cursos impartidos, número de lotes de demostración—en oposición a productos como tasas de adopción de variedades mejoradas o aumentos de la producción; (2) los organismos trabajan con arreglo a un *amplio* programa de cultivos y actividades, y por períodos de *duración indefinida*, sin urgencia alguna que impulse la introducción de una determinada variedad o práctica mejorada; y (3) con frecuencia, ni el sector privado ni el público pueden proporcionar los insumos mejorados en forma ininterrumpida y oportuna y a un costo razonable, reduciendo así los ingresos que habrían de percibirse

como resultado de su adopción. En resumen, tanto las campañas para erradicar enfermedades como otros casos de mejores resultados han redefinido la tarea de la extensión y la investigación, de manera que ha sido posible obtener un buen desempeño de los propios organismos que no lo tuvieron con un programa mucho más amplio.

Conclusiones y Recomendaciones

Los proyectos tenían mejores resultados cuando: (1) los organismos tenían más control sobre la calidad y el ritmo de la ejecución, control que lo habían obtenido en parte al ejecutar tareas que incumbían a otros organismos, o contratando a éstos y supervisándolos; (2) las tareas de los proyectos eran especialmente "fáciles", o los nuevos organismos y unidades podían iniciarse con tareas fáciles, o se modificaba el proyecto para hacer fáciles las tareas difíciles; (3) los incentivos eran tales que se obtenía financiamiento adicional del gobierno o de los beneficiarios en el curso de la ejecución y de una manera que resultaba en proyectos de mejor calidad; (4) los organismos estaban sujetos a presiones externas para que respondiesen por sus actividades, especialmente presiones de terceros interesados; y (5) había una combinación extraordinariamente complementaria de medidas tomadas por los gobiernos estatal y local, este último para ayudar a reducir costos y demoras, hacer que los organismos estatales sean más responsables, y obtener el mayor uso de los materiales y mano de obra locales.

Aunque la importancia de las *presiones de demanda* para inducir el buen rendimiento no es una conclusión nueva, el Banco y otros donantes adoptan por lo común un enfoque "favorable a la oferta" en el diseño de proyectos, dedicándose principalmente a fortalecer la capacidad de determinados organismos. Aunque podría parecer que el ámbito de la demanda está fuera del alcance de los funcionarios de los proyectos, los casos examinados proporcionan numerosos ejemplos de cómo los organismos podían someterse a estos tipos de presiones de demanda. Se dan a continuación dos sugerencias.

- Se podría atraer a "buenos" gobernadores y otros dirigentes elegidos a que apoyen más los proyectos dividiendo los períodos de planificación y ejecución en ciclos cuadrienales que coincidan con el ciclo electoral. Se podría permitir asimismo que estos dirigentes seleccionen de una lista de posibles actividades que el Banco apoyaría, y eso es precisamente lo que muchos gobernadores hicieron, al respaldar sólo los componentes que más les agradaban y a veces recaudando fondos adicionales para los mismos. Debe haber flexibilidad suficiente para que un estado escoja agua para las zonas rurales y otro crédito para pequeños agricultores, tal cual lo hicieron los gobernadores de Sergipe y Pernambuco, respectivamente. Esto contrasta con el diseño corriente de los proyectos, en que los numerosos componentes y los largos períodos de ejecución hacen que los dirigentes elegidos pierdan interés o usen los recursos del proyecto simplemente para satisfacer necesidades presupuestarias de corto plazo o para saldar deudas políticas.
- Se debe someter a los organismos de ejecución a "choques" de demanda encauzando una parte de sus recursos financieros a través de los "usuarios" de sus servicios: no únicamente de los grupos de beneficiarios, sino de otras entidades públicas, bancos de desarrollo, y gobiernos municipales. Tal como los administradores que asumieron funciones ajenas dieron en contrato las tareas que no podían llevar a cabo por sí mismos, o hicieron que los organismos de ejecución las llevaran a cabo, los terceros interesados "contratarían" igualmente los servicios de los organismos proveedores. La dotación de fondos a los organismos proveedores a través de los usuarios traería también al ámbito del proyecto las características de los casos exitosos: tareas especificadas con precisión, normas de rendimiento medibles y visibles y sanciones por incumplimiento claramente expresadas.

Deben seleccionarse las actividades para fines de financiamiento y asignarse a determinados organismos, en parte según su relativa *facilidad y dificultad*. Algunos ejemplos de posibles tareas "más fáciles"—al menos para comenzar—son las campañas para combatir enfermedades y plagas epidémicas de los cultivos, instalación de sistemas sencillos de agua en las zonas rurales, y algunas formas de adquisición de tierras. Además, dado el nuevo interés en la infraestructura rural, debe admitirse que hay organismos reconocidos de ejecución de obras de infraestructura que se desempeñan a menudo deficientemente en tareas que se les asignan en los proyectos del Banco; otros organismos, con menos experiencia o menos personal especializado, se desempeñan a veces mejor. Esto indica que en ocasiones tales actividades deben dejarse fuera de sus tradicionales centros burocráticos, quizá sólo temporalmente, y confiárselas a entidades "poco apropiadas" o incluso a nuevas unidades, *si* éstas están más motivadas por corrientes de simpatía o presiones externas para desempeñarse bien.

Con respecto a las enseñanzas que han de aprovecharse de la experiencia de *asunción de funciones* en general, (1) se debe dar facultades exclusivas sobre un proyecto a un *único* organismo, sea que haya pocas o muchas tareas, o que se trate de un organismo reconocido o de uno nuevo, o que el proyecto tenga un organismo de ejecución o una unidad de coordinación, y (2) se debe dar a ese único organismo los medios políticos y financieros para llevar a cabo las tareas del proyecto por sí o contratándolas con otros organismos públicos, empresas privadas, u organizaciones no gubernamentales. En otras palabras, la lección que se deriva de la experiencia sobre asunción de funciones *no* consiste en que: (1) el Banco deba volver a crear nuevas y poderosas

entidades paraestatales; *ni* en que (2) se deba dar a las unidades de los proyectos (en oposición a terceros organismos) las atribuciones necesarias para ejecutar las tareas por sí mismas; *ni* en que (3) el número de tareas deba simplemente reducirse—aunque éste no sería un mal comienzo.

Sobre la base de lo que se ha mencionado, las conclusiones operacionales en cuanto a *investigación y extensión* son bastante claras. (1) Los proyectos deben favorecer actividades de un solo cultivo u otras sumamente focalizadas, con un principio y un final determinados con claridad, y que tiendan a tener resultados medibles en términos de *producto*. Si bien el tipo de apoyo amplio que se da ahora guarda más armonía con la reciente importancia concedida a la investigación de *sistemas* de cultivo, es también estructuralmente engorroso; el apoyo de esta clase es más apropiado en proyectos dedicados a fortalecer un *solo* organismo durante un largo período de tiempo, como el exitoso apoyo del Banco a la entidad brasileña paraestatal EMBRAPA, durante muchos años. (2) Los proyectos deben financiar la investigación y la extensión, al menos parcialmente, a través de los interesados porque éstos conceden al trabajo aplicado y a la diseminación un valor mayor del que les dan los organismos de investigación. (3) Los proyectos deben financiar centros de investigación para difundir más ampliamente uno o dos de sus productos exitosos favoritos.

En sentido más general, el Banco debe: (1) asumir un método más "urbano" en sus proyectos de desarrollo rural—como en el caso de sus proyectos de "ciudades intermedias" del Brasil y otros países—recurriendo a fondos de contrapartida y otros incentivos como medio de a) aprovechar los recursos y la capacidad empresarial para el desarrollo disponibles localmente, y b) colocar ciertas funciones en el nivel en que los resultados sean mejores; (2) atender más a la vinculación entre el financiamiento para los agricultores de pequeña escala y la movilización del ahorro rural, que puede requerir proyectos centrados exclusivamente en instituciones financieras rurales y por lo tanto *no* enraizados en proyectos de desarrollo agrícola; y (3) actuar en las innumerables posibilidades de mediar en la transferencia de tierras a los pequeños agricultores para el cultivo productivo en una forma más descentralizada, especialmente junto con el suministro de caminos y agua para riego.

Notas

1. Al formular observaciones sobre un borrador de este informe, la Secretaría de Desarrollo Regional de la Oficina del Presidente, destacó que el informe no sigue el enfoque corriente usado por el Banco Mundial en el análisis de los proyectos financiados por la institución. Como se explica en el texto, este estudio, intencionalmente, no es una evaluación de los proyectos del Nordeste sino un examen realizado con un propósito determinado y una preocupación por llegar a conclusiones de utilidad general fuera del ámbito del desarrolo rural y fuera del Banco. La Secretaría habría querido ver también un tratamiento más completo de varios temas (el marco económico, político, social y cultural de la región y del país; la relación entre la exposición sobre asunción de funciones de otros organismos y los problemas de dirección y de distribución de los recursos entre componentes; la relación entre buenos resultados y grupos sociales diferentes, como los de propietarios, colonos, aparceros y agricultores inquilinos; la relación entre monocultivos exitosos y los problemas de distribución en los mercados; y información sobre cuál proyecto tuvo buenos resultados en términos del porcentaje más bajo de tareas del proyecto empleadas en su administración). Concordamos plenamente en que estos temas merecen ser tratados más a fondo, pero no lo han sido debido a limitaciones de tiempo, recursos financieros, y extensión del informe final. Estamos de acuerdo en que estos son temas importantes y apoyamos la idea de que es necesario realizar estudios de evaluación adicionales de los proyectos conjuntos del Banco Mundial y el gobierno del Brasil en la región del Nordeste. La Secretaría habría querido también ver una investigación de los componentes en los cuales no funcionó bien la coordinación interinstitucional. En realidad, no hemos analizado detalladamente en este informe los componentes de rendimiento deficiente, en parte por haberlo hecho en forma más general en otros estudios de evaluación, especialmente en el informe del DEO de 1988 sobre la experiencia (en escala mundial) respecto del desarrolo rural. Más específicamente respecto del punto planteado por la Secretaría, este informe describe lo que funcionó bien en el marco de los tipos de deficiencias más frecuentes—por ejemplo, en el otorgamiento oportuno de crédito para siembras, en la colaboración de los servicios de extensión e investigación, en la ejecución oportuna de los proyectos o de componentes de los mismos. En algunos informes de evaluación ex post preparados por el DEO se han analizado los problemas de proyectos individuales. Este trabajo no sustituye a una evaluación de la cartera de proyectos, ni a un estudio del Nordeste del Brasil, sino más bien utiliza la muestra extraordinariamente grande de proyectos afines para suministrar al Banco, y en general a los economistas interesados en el desarrollo, datos útiles sobre el diseño eficaz de proyectos de asistencia a los pobres de las zonas rurales. Véase el texto completo de las observaciones del gobierno en el Anexo 1.

2. Alagõas, Bahía, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe y Minas Gerais.

3. La Oficina Regional observa que la "segunda generación" de proyectos ha sido reformulada. Las experiencias recogidas en este informe se han extraído de los proyectos de la primera y segunda generaciones, tal como fueron ejecutados originalmente. La Oficina Regional ha observado también que "la ejecución de la 'segunda generación' sólo está, en el mejor de los casos, en un punto medio y ha sido bastante distorsionada por problemas financieros, y que las conclusiones a que se ha llegado sobre la base de la experiencia de dicha generación de proyectos, en general no están relacionadas con su diseño".

4. Apoio para Pequenas Comunidades Rurais (Apoyo para Pequeñas Comunidades Rurales).

Résumé Analytique

En 1974, dans le cadre d'un programme d'ensemble visant d'une façon générale à combattre la pauvreté, la Banque avait annoncé une nouvelle stratégie ambitieuse pour faire reculer la pauvreté en milieu rural et stimuler la croissance agricole. Nés de l'insatisfaction inspirée par l'impuissance des efforts de développement passés à réduire la pauvreté en milieu rural et les inégalités, ces projets de développement rural « nouvelle formule » s'écartaient des interventions précédentes et les complétaient de deux façons. En se concentrant sur les services de production agricole et les subventions à l'agriculture, ils visaient directement les pauvres. De plus, ils offraient à certaines régions un assortiment complet d'investissements axés sur le développement, allant de travaux routiers au crédit agricole et à la santé; les régions étaient choisies pour leur potentiel agricole et leur forte concentration de petits exploitants. En 1986, c'est-à-dire 12 ans plus tard et après 19,1 milliards de dollars (courants) d'engagements de la Banque en faveur du développement rural dans le monde entier, dont 6,3 milliards de dollars pour les projets de développement régional « nouvelle formule », cette nouvelle stratégie n'inspirait plus que désenchantement. L'exécution des projets s'était heurtée à une multitude de problèmes, et l'on se posait de sérieuses questions quant à leur efficacité à réduire la pauvreté et accroître la productivité agricole. Ces préoccupations, évoquées ci-dessous, ont été exposées dans une importante étude de l'expérience du développement rural effectuée en 1987 par le Département de l'évaluation rétrospective des opérations.

S'il est vrai que les activités qui visaient spécialement le développement rural méritent une bonne part des critiques qui leur ont été addressées, certains de ces projets ou de leurs éléments ont donné de bons résultats. Ces exceptions ne justifient pas par elles-mêmes que l'on en revienne à cette forme de développement rural, mais on peut se demander comment certains projets auraient pu être plus efficaces avec une conception et dans un contexte à présent considéré comme peu propice à de bons résultats. En fait, si certains de ces projets ou activités ont pu supporter l'épreuve de circonstances aussi défavorables, on doit certainement pouvoir en tirer quelques enseignements sur les moyens d'améliorer aujourd'hui la conception de nos programmes. Bien que la Banque ait en grande partie renoncé à cette stratégie du développement rural « nouvelle formule », elle continue de consacrer une grande attention au choix des politiques à adopter et un important volume de ressources à ces mêmes secteurs recherche agricole, vulgarisation agricole, financement rural, irrigation, routes reliant les zones de production aux marchés, eau potable, santé, éducation qui étaient visés, individuellement ou par paires, par les projets de développement rural.

Les évaluations rétrospectives passées des projets de développement rural ayant fait ressortir davantage les causes d'échec que les causes de succès comme l'a fait remarquer l'étude du Département de l'évaluation rétrospective des opérations elle-même, elles nous ont éclairés davantage sur ce qu'il faut *éviter* que sur ce qu'il *faut faire*. La présente étude cherche à faire le contraire. Elle s'efforce de faire ressortir les tendances qui se dégagent de tout un éventail d'exemples de bons résultats observés dans un ensemble de 23 projets de développement rural exécutés dans le Nord-Est du Brésil où se situe l'un des programmes les plus complets de développement rural de la Banque. Cette étude s'interroge sur les leçons à tirer des tendances que révèlent ces bons résultats quant à la conception des projets et, d'une façon plus générale, quant au rôle du secteur public dans le développement rural [1]. Comme le lecteur le constatera, les réponses à cette question ne peuvent se résumer à un vote en faveur ou à l'encontre du « développement rural intégré », mais peuvent être intéressantes pour une grande variété de projets et de secteurs où la Banque est aujourd'hui active. Comme le montre la note 1 (et l'Annexe 1), le Gouvernement brésilien tient à ce que le lecteur ne considère pas cette étude comme destinée à remplacer l'évaluation

de l'ensemble du portefeuille de projets de développement rural.

Divers problèmes se sont posés à l'occasion de certains types de projets de développement rural entrepris par la Banque dans le monde entier, y compris dans le Nord-Est : (1) un trop grand nombre de composantes et un excès de complexité; (2) l'absence d'enveloppes techniques destinées à permettre aux petits exploitants d'accroître leur productivité; (3) le manque de participation des bénéficiaires à la conception et à l'exécution des projets; et (4) un contexte de politique économique défavorable à l'agriculture. En outre, les projets du Nord-Est ont souffert : (1) de retards chroniques dans le transfert des fonds de contrepartie brésiliens aux bureaux et organismes d'exécution des projets, et (2) des taux d'inflation élevés et en hausse (jusqu'à trois chiffres) et, par conséquent, de la crise financière qu'a connue le Brésil durant les années 80. Cette étude pose la question de savoir pourquoi ces problèmes ont parfois épargné certains projets ou organismes, ou comment ceux-ci ont pu donner de bons résultats face à une telle adversité.

Les Projets du Nord-Est

Entre 1975 et 1987, le Gouvernement brésilien a lancé 22 projets de développement rural intégré dans les 10 Etats du Nord-Est du Brésil [2] et un projet foncier couvrant l'ensemble de la régionqui représentait un volume d'engagements de 3,3 milliards de dollars dont la Banque a financé 42 pour cent, soit 1,4 milliard de dollars. La « première génération » de projets comprenait en gros une douzaine de composantesqui allaient du crédit agricole et de la vulgarisation aux routes de desserte et à l'électrification, jusqu'à la santé et l'éducation, mais aucun ne couvrait tous ces aspects. Les éléments de base de chaque projet étaient le crédit (23 pour cent), les routes de desserte (20 pour cent), les activités liées à la terre (16 pour cent) et la vulgarisation agricole (14 pour cent) qui représentaient 72 pour cent des coûts estimés lors de l'évaluation. Pour tenter de réduire la complexité de ces projets et les concentrer plus exclusivement sur la production agricole, les volets santé, éducation et routes ainsi que certaines composantes mineures ont été éliminés dans les projets de la seconde génération. Le crédit (30 pour cent), la vulgarisation (24 pour cent) et un nouveau volet de participation communautaire (16 pour cent) représentaient 70 pour cent des dépenses prévues lors de l'évaluation; les activités liées à la terre ont été regroupées dans un projet foncier régional distinct (qui représentait lui-même 16 pour cent des montants engagés). [3]

L'organisation du projet type faisait intervenir la Banque et plusieurs niveaux de l'administration brésilienne les ministères du gouvernement fédéral l'organisme chargé du développement du Nord-Est, des banques semi-publiques, les services des projets à l'échelon des Etats et les organismes d'exécution. Les services de coordination des projets, créés au sein des directions du Plan ou de l'agriculture des Etats, étaient chargés de concevoir les programmes annuels et d'en superviser l'exécution, mais n'avaient ni les responsabilités d'exécution ni le pouvoir d'accorder les crédits ou de les refuser aux organismes d'exécutioncette question est examinée au Chapitre 2; il y a toutefois une exception à cette règle : le volet « participation communautaire » (APCR) [4] des projets de la deuxième génération, décrit plus avant, où les bureaux des projets partageaient les responsabilités d'exécution avec les syndicats ruraux, les services de vulgarisation et/certaines coopératives d'exploitants. Les municipalités, souvent représentées au sein des conseils ad hoc qui veillaient à l'exécution des sous-projets APCR, sans jouer à proprement parler de rôle dans les projets, leur ont parfois apporté une contribution importante autant qu'inattendue (Chapitres 2 et 3).

Totalisant 222 millions de dollars, le volet participatcn communautaire constitue l'effort le plus important de la Banque pour rendre l'exécution de ses projets de développement rural plus participative. Le Fonds d'appui aux petites communautés rurales, qui compte en moyenne 36 agents communautaires et cadres par Etat, accordait des subventions pouvant atteindre 10.000 dollars aux associations formées dans les communautés de moins de 5.000 habitants : (1) 65 pour cent pour des entreprises communautaires telles que minoteries, banques de semences, centres de distribution d'intrants et installations de stockage; (2) 25 pour cent pour de petits projets de travaux publics (réparation de routes, lavoirs communautaires, toilettes publiques); et (3) 15 pour cent pour des mesures de renforcement institutionnel d'organismes communautaires utilisés principalement par les fédérations de main-d'oeuvre rurale pour la formation.

Bons Résultats (Chapitre 2)

S'est révélé plus difficile que prévu à l'origine de définir le « succès » ou, plus précisément, ce que l'on entend par « de bons résultats ». Au début, les exemples de bons résultats *pouvaient* se classer dans trois catégories : (1) ceux qui étaient observés à l'échelle du *projet* tout entier (Tabuleiros Sul à Sergipe, Ibiapaba à Ceará); (2) ceux qui ne portaient que sur certaines *composantes* (routes, électrification, eau potable, santé et éducation, ou crédit agricole, recherche et vulgarisation); et (3) ceux qui avaient trait à certains *organismes* (le bureau du projet à Sergipe). D'autre part, devant le mécontentement souvent exprimé à l'égard du crédit agricole, de la recherche ou de la vulgarisation, on a identifié également plusieurs cas de succès dans la diffusion de variétés améliorées aux petits exploitants afin d'étudier pourquoi les résultats ont été tellement différents dans ces cas (Chapitre 5).

Ces trois catégories de projets, composantes et organismes n'ont pas tenu longtemps. (1) Les organismes considérés les plus efficaces n'ont pas toujours été à la hauteur de leur réputation (et ceux qualifiés de médiocres ont parfois donné des résultats d'une qualité étonnante); (2) les bons résultats étaient souvent limités dans le temps au mandat d'un gouverneur particulièrement favorable et exigeant (par exemple, 1982-86 à Sergipe, et 1987-89 à Bahia, Maranhão, et Pernambouc) une question examinée au Chapitre 2; (3) les appréciations favorables données par beaucoup aux actions dans les domaines de l'infrastructure, de la santé, de l'éducation étaient parfois dues davantage à d'*autres facteurs* qu'à l'impact ou à la prestation d'un organisme par exemple, à la visibilité relative des résultats (nouvelles routes par opposition à des variétés de semences permettant d'accroître la productivité), au fait que la tâche était relativement aisée (installation de réseaux d'alimentation en eau en milieu rural par opposition à la vulgarisation agricole); au fait que le bureau du projet ou d'autres organismes avaient repris des tâches qui incombaient jusque-là aux services d'infrastructure, dont les résultats *laissaient à désirer* question examinée au Chapitre 2; et (4) alors que de nombreux observateurs, se fondant sur l'impact, avaient donné des appréciations favorables aux volets santé et éducation, ces volets ont été régulièrement mal notés dans les rapports de supervision pour ce qui était de la performance des institutions.

En fin de compte, on ne peut dire des résultats d'aucune catégorie de projets, de composantes ou d'organismes qu'ils ont été constamment bons pendant toute la période examinée, ou constamment meilleurs que les autres. On a parlé de *périodes* de bons résultats, mais pas d'organismes, de composantes ou de projets systématiquement « bons ». En essayant de dénouer cet énigme des flux et reflux des résultats, on a constaté que leur qualité avait souvent moins à voir avec les *capacités internes* de l'organisme lui-même qu'avec un ensemble d'autres facteurs à savoir, (1) le degré relatif de difficulté des tâches; (2) la présence de pressions extérieures; (3) l'existence d'incitations à l'efficacité; et (4) la participation de protagonistes et d'organismes véritablement intéressés à l'échelon local. Un écart sensible de l'une de ces variables pouvait se traduire par un revirement de la courbe de performance dans un sens ou dans l'autre. Comme la conception et la supervision des projets ont tendance à se concentrer sur l'amélioration de la capacité interne des organismes, cette constatation tendrait à rendre le renforcement institutionnel d'autant plus difficile. Mais il n'est souvent pas plus difficile et il est même parfois plus facile d'agir sur ces variables que d'améliorer de l'intérieur l'action des institutions.

Une mise au point s'impose sur ce que cette étude ne *fait pas*. Comme l'explique la note 1, cette étude n'examine pas les questions de politique macroéconomique telles que la surévaluation des taux de change et les autres mesures agissant sur les exportations agricoles, ou l'octroi de subventions au crédit agricole et à d'autres intrants. Deuxièmement, elle ne cherche pas à porter un jugement sur la stratégie du Gouvernement brésilien ou de la Banque pour réduire la pauvreté dans le Nord-Est. Troisièmement, elle ne constitue pas une évaluation rétrospective des projets du Nord-Est, ni du développement rural intégré, en général.

Comment les Projets Ont Eté Réinventés (Chapitre 2)

Les activités ayant donné de meilleurs résultats se sont systématiquement écartées de leur conception d'origine de cinq façons. (1) Elles ont souvent été menées en moins de temps qu'il n'avait été prévu lors de l'évaluation installation de puits et de bornes-fontaines dans les communautés rurales, vastes campagnes de distribution de variétés améliorées de semences et de souches, et, dans certains cas, acquisition de terre à redistribuer. Cette rapidité contrastait avec la tendance générale aux retards d'exécution; ce qui a du reste obligé la Banque à prolonger la durée d'exécution de cinq ans pour les projets de la première génération à plus de huit ans pour ceux de la deuxième. Ces délais d'exécution plus longs, qui peuvent sembler plus judicieux dans le cas de tâches difficiles telles que renforcement d'institutions, ont, en fait, soustrait les projets à certaines pressions et incitations qui caractérisaient souvent les projets réussis.

(2) Les projets qui ont donné les meilleurs résultats n'ont été finalement qu'une version plus étroite de ce qui avait été envisagé lors de l'évaluation, se limitant essentiellement à une ou deux composantes. Les domaines de prédilection ont été l'alimentation en eau des zones rurales, la participation communautaire et la distribution des terres. Cette « réinvention » a été possible pour les raisons suivantes : a) un gouverneur décidé à aider au succès du projet a choisi l'une de ses composantes et apporté sa caution personnelle à son succès; b) les chefs de projet ont concentré leur action sur leurs composantes favorites; c) les insuffisances et les retards dans les transferts de fonds de contrepartie qui ont été l'un des principaux problèmes d'exécution des projets ont suffisamment brouillé le budget pour donner aux chefs de projet plus de latitude pour refaçonner les projets à leur goût et les ramener à des proportions plus acceptables.

(3) La relative facilité (ou difficulté) des tâches confiées aux institutions dans le cadre des projets a contribué pour beaucoup à la qualité de l'action de celles-ci. Les organismes de distribution d'eau ont constaté que l'alimentation en eau des populations rurales était plus facile à exécuter que les travaux d'irrigation, par exemple, car elle exige moins d'études et est moins tributaire d'éléments extérieurs sur lesquels ces organismes n'ont pas prise notam-

ment, d'autres institutions et usagers. C'est pourquoi la conception et la mise en place de réseaux d'alimentation en eau en milieu rural se sont dans l'ensemble mieux déroulées que les projets d'irrigation, et c'est également ce qui explique pourquoi la nouvelle compagnie d'alimentation en eau des populations rurales de Sergipe a bien fonctionné tant qu'il s'agissait d'alimenter des populations, puis a donné de mauvais résultats dans l'irrigation. En outre, les objectifs et les normes imposés aux projets eux-mêmes ont rendu les tâches plus difficiles ou moins satisfaisantes pour certains organismes, en particulier la réorientation des services du secteur public vers les pauvres, la volonté de recourir à des techniques moins capitalistiques pour l'infrastructure et, reflétant en partie cette dernière tendance, le souci de réduire les coûts unitaires et d'atteindre davantage de personnes.

(4) Lorsque les résultats étaient bons, c'est que la direction du projet avait été soumise à des *pressions* extérieures au niveau de la demande faciles à identifier qui l'ont poussée à faire avancer les choses, à atteindre de nombreuses populations, à réduire les coûts ou à agir de façon responsable sur d'autres fronts. Ces pressions venaient non seulement des bénéficiaires, mais des gouverneurs, d'autres organismes d'Etat, des banques de développement, des municipalités, des organisations non gouvernementales et de la Banque mondiale. L'apparition de ces pressions permet d'expliquer pourquoi les institutions peu efficaces ont parfois brusquement affiché des résultats d'une qualité étonnante; de même, l'absence ou la disparition de ces pressions explique en partie pourquoi les organismes jugés jusque-là efficaces ont vu soudain leurs résultats se gâter.

Souvent, les organismes plus efficaces ont *repris* les tâches qui devaient être exécutées par d'autres. *Premièrement*, les excellents spécialistes de la direction des affaires publiques qui avaient été engagés par les bureaux de coordination des projets ne voulaient pas s'en tenir à coordonner les travaux d'autres organismes, mais voulaient eux-mêmes intervenir dans leur exécution. *Deuxièmement*, certains directeurs, frustrés par les lenteurs et la confusion qui caractérisaient l'action de l'organisme d'exécution désigné, ont assumé eux-mêmes la direction des travaux; cette « prise en charge » leur a conféré l'influence recherchée sur le rythme, la qualité et le coût d'exécution du projet, et a rendu leur tâche moins vulnérable aux incertitudes et à la mauvaise volonté. *Troisièmement*, les gouverneurs puissants et favorables aux projets, impatients devant l'absence de résultats de la part des organismes en place, ont parfois aidé à donner aux responsables des projets l'excuse et les moyens de reprendre le projet aux autres organismes.

Comment, dans un contexte institutionnellement « développé », les organismes inexpérimentés ont-ils pu se substituer aux institutions en place et accomplir un travail raisonnable? *Premièrement*, ils ont parfois enfreint les règles des projets et sous-traité les travaux à des organismes publics autres que les organismes désignés, à des sociétés privées ou à des organisations non gouvernementales; autrement dit, ils ont le mieux réussi à obtenir ce qu'ils attendaient des autres organismes, *non pas* lorsqu'ils « coordonnaient » l'action de ces organismes, mais lorsqu'ils avaient le pouvoir de traiter ou de forcer des organismes à faire ce que l'on attendait d'eux. *Deuxièmement*, lorsqu'un bureau de projet ou un autre organisme concentrait son attention et ses maigres ressources sur les composantes qu'il était le mieux à même de gérer, cela réduisait pour eux la complexité et la difficulté des projets. *Troisièmement*, les organismes qui reprenaient les projets *aimaient* les tâches que les institutions en place n'aimaient pas; cela leur donnait et à leur personnel l'avantage d'une grande motivation, qui s'est souvent révélée plus importante pour le succès d'une activité qu'une longue expérience. *Quatrièmement*, en raison de la mobilité des experts du secteur public entre les diverses institutions, les organismes qui ont repris leur relais ont pu tirer partie des compétences de *tous* les spécialistes qui appartenaient au secteur public et obtenir qu'un spécialiste soit détaché auprès d'eux, souvent de l'organisme dont ils avaient repris les fonctions. En vérité, la création d'un pool d'experts dans le secteur public du Nord-Est est peut-être l'une des contributions les plus importantes des projets réalisés dans cette région dont on ne mesure pas toujours l'importance avec précision, car il s'agit d'une conséquence indirecte dont l'évaluation d'un quelconque organisme « instable » ne rend pas compte.

Ce phénomène de transfert de fonctions, et l'amélioration des résultats dont il s'est accompagné, est révélateur de la différence qu'il y a à travailler avec des organismes en place ou à en créer de nouveaux. Tirant des leçons du passé, la Banque et les Brésiliens ont décidé de s'adresser à des institutions *établies* pour les projets du Nord-Estse bornant à créer un modeste bureau de coordination des projets, sans rôle de direction. Cependant, les exemples de transfert révèlent aussi certains succès de la part d'organismes *non* établis ou spécialisés dans une activité particulière, et qui n'étaient pas destinés à l'origine à exécuter telle ou telle composante ainsi que de la part de cadres dynamiques qui *n'étaient pas* prêts à se contenter d'un « modeste » rôle de coordination. L'importance de ces reprises permet également de comprendre pourquoi la vulgarisation, la recherche et le crédit agricoles ont si peu donné satisfaction : ces composantes étaient tout simplement plus difficiles à reprendre en main que les autres. Enfin, le succès n'a pas toujours accompagné la prise de contrôle par un nouvel organisme, de même que la prestation des organismes établis, désignés lors de l'évaluation, n'a pas toujours été

mauvaise. Plus précisément, la reprise et les bons résultats allaient de pair dans assez de cas pour attirer l'attention et réclamer une explication.

Mobilisation de Ressources Financières Supplémentaires (Chapitre 3)

Les projets les plus performants, ou certains éléments de ceux-ci, ont souvent incité à mobiliser des ressources supplémentaires par-delà de ce qui avait été prévu lors de l'évaluation par les gouverneurs, les directeurs d'organisme, les Secrétaires d'Etat, les maires, les banques ou les bénéficiaires eux-mêmes. Ces initiatives de mobilisation de ressources méritent d'être examinées de près, car elles sont apparues à une époque d'extrême austérité budgétaire au Brésil, où il était déjà assez difficile au Gouvernement brésilien de réunir les fonds de contrepartie des projets, sans parler de prévoir un financement *supplémentaire*. On trouvera ci-après trois exemples de cette mobilisation de ressources.

(1) Un fonds de l'Etat accordant des prêts pour des projets de travaux dans les municipalités a débouché sur un type de prélèvement municipal officieux pour le financement de terrains, de matériaux et de clôtures. (2) Le plafond imposé par la Banque aux coûts à l'hectare de l'irrigation par puits tubulaire et à partir de cours d'eau a entraîné la donation inattendue de terrains pour la petite irrigation par les municipalités et par des exploitants privés selon une formule novatrice de partage des coûts. (3) Le maintien d'une marge viable entre les revenus que paient les banques rurales sur les dépôts et celui qu'elles tirent de leurs prêts leur a permis de mener une campagne active de mobilisation des dépôts, et d'accroître ainsi le volume de leurs prêts aux petits exploitants. Incidemment, aucune de ces incitations ne visait intentionnellement à mobiliser des ressources additionnelles, mais il n'y a pas de raison qu'elles ne soient prévues expressément à cet effet.

Une part considérable de ces ressources additionnelles est venue des municipalités. Pourtant, celles-ci n'avaient aucun rôle officiel dans les projets du Nord-Est car elles sont généralement perçues comme insolvables, soucieuses de soigner leur clientèle électorale et dépourvues des moyens techniques nécessaires, ce qui est souvent le cas. Dans chaque catégorie d'exemples, certains cas portaient sur les projets du Nord-Est, d'autres, sur d'autres projets associés aux précédents, et certains, sans s'appuyer sur ces projets, présentaient avec eux de grandes similarités quant à leur conception et à leur lieu d'exécution. En outre, la façon dont ces municipalités ont été amenées à intervenir dans la mobilisation de ressources leur a permis d'exercer de saines pressions extérieures sur les organismes d'Etat pour les inciter à la responsabilité, au respect des délais d'exécution, au maintien des coûts à des niveaux raisonnables et à l'application de normes moins complexes et capitalistiques. Le personnel de la Banque a essayé, souvent sans résultat, d'accomplir la même chose.

Dans ses efforts de mobilisation des ressources, la Banque s'est presque exclusivement attachée à obtenir l'engagement d'un financement de contrepartie *avant* le démarrage du projet, et à persuader le gouvernement fédéral et les gouvernements des Etats à fournir les fonds promis pendant l'exécution. Les ressources supplémentaires mobilisées n'avaient *pas* été engagées à l'avance : elles résultaient d'une structure d'incitations telle qu'il valait la peine pour les institutions et les particuliers de contribuer *après* le démarrage des travaux et d'une manière qui n'aggrave pas l'inflation ou le déficit budgétaire. D'ailleurs, les travaux de recherche parrainés par la Banque, ou autres, ont montré que la mobilisation de l'épargne rurale est déterminante pour le développement de solides *institutions financières rurales* qui sont elles-mêmes cruciales au développement agricole. Cependant, les projets de développement agricole et rural de la Banque n'ont pas établi de lien entre la fourniture de crédit et la mobilisation des dépôts, alors qu'un tel lien pourrait aussi contribuer à résoudre le problème d'un excès de bonification des taux d'intérêt.

La Question Foncière (Chapitre 4)

En réunissant (1) les exemples susmentionnés de mobilisation de ressources foncières additionnelles, (2) certains aspects de la réforme agraire et de la colonisation rurale à Bahia, Ceará et Maranhão, et (3) une expérience fructueuse d'achats de terres et de peuplements collectifs à Sergipe, on peut tirer d'importantes leçons sur la question foncière. Ces exemples présentaient certaines différences de caractéristiques en ce qui concerne le régime foncier et l'existence de terres se prêtant à l'expropriation ou à l'achat. Néanmoins, on remarque certains thèmes communs dans cette diversité qui vont tous dans le sens d'une approche de la colonisation des terres qui soit moins coûteuse, plus rapide et plus décentralisée, et qui repose davantage sur la participation des populations, suscite moins l'hostilité que l'expropriation et soit économiquement viable.

Premièrement, les marchés fonciers ont donné de meilleurs résultats pour les petits exploitants lorsque les organisations locales (coopératives, syndicats, pouvoirs locaux) et les bénéficiaires ont participé à la recherche de la terre, à la décision de l'acquérir et à l'établissement de son prix. *Deuxièmement*, cette formule plus décentralisée a permis d'introduire certains moyens de contrôle de la collusion entre les grands propriétaires terriens et l'Etat. *Troisièmement*, de nombreux exemples de succès dans la cession de terres (et le développement agricole) ont été obser-

vés à la limite des « frontières intérieures » dans les *régions déjà colonisées*, où le marché laissait entrevoir de claires perspectives de revenu de l'intensification de certaines cultures sur les petites exploitations—les tomates à Ibiapaba, les oranges à Sergipe, les cultures maraîchères irriguées dans la région d'Irecê, dans l'Etat de Bahia. Cet aspect va à l'encontre de l'idée habituelle selon laquelle l'accroissement de la valeur des terres qui va de pair avec le développement et l'intensification de leur utilisation rend les cessions *moins* faciles. *Quatrièmement*, les possibilités de cession dans les régions déjà colonisées portent sur de « petites parcelles » plutôt que sur les grandes étendues généralement envisagées par les responsables de la planification des projets de colonisation rurale. *Cinquièmement*, les chefs de projet tenaient beaucoup à faire en sorte que les marchés fonciers et autres mécanismes fonctionnent d'une manière qui permette de « produire » des parcelles à bas prix ou gratuites, parce que a) l'expropriation de parcelles de moins de 500 ha n'était pas autorisée par la loi, ce qui faisait de l'achat ou de l'acquisition par donation la seule option offerte pour l'acquisition de parcelles plus petites, et b) les projets prévoyaient plus de fonds pour les investissements d'infrastructure et les services agricoles que pour l'acquisition de terres (par expropriation *ou* achat). *Sixièmement*, la petite irrigation privée associée à une production agricole de grande valeur était l'une des caractéristiques visibles de plusieurs des cas examinés.

Les leçons de ces exemples donnent à penser qu'il existe de plus grandes possibilités de cession de terrains aux paysans sans terre que ne le laissait entrevoir le *Rapport sur le développement dans le monde 1990* sur la pauvreté. Elles renforcent aussi la nouvelle optique de ce rapport, qui tend à traiter « l'infrastructure rurale » comme un moyen de promouvoir un développement rural fondé sur l'équité. Ainsi, dans les exemples les plus concluants parmi ceux décrits précédemment, les organismes chargés de l'exécution des projets ont lié strictement l'aménagement de routes et de réseaux d'irrigation au processus d'acquisition de terres et à leur transfert aux petits exploitants. Le projet d'Ibiapaba a fait exception à cette règle : il a fourni les routes et l'électrification sans assurer la distribution des terres, contribuant à aggraver l'inégalité qui caractérisait auparavant le régime foncier.

Recherche, Vulgarisation et Développement Agricole (Chapitre 5)

Dans les exemples de succès dans la diffusion de variétés améliorées, *la nature de la tâche et le contexte* auxquels étaient confrontés les organismes d'exécution présentaient des différences frappantes par rapport à ce que faisaient ces organismes dans d'autres circonstances. L'incapacité chronique de la recherche et de la vulgarisation à collaborer avait disparu, ou la coordination entre la vulgarisation et la recherche s'est révélée *non* nécessaire à l'adaptation et à la diffusion. Beaucoup de ces exemples sont nés de « campagnes » contre les maladies et les ennemis des cultures l'anthonome du cotonnier dans les Etats producteurs de coton, les maladies de l'orange à Sergipe, et les champignons attaquant les racines des bananiers à Paraíba et ont transformé les conditions de travail de la recherche et de la vulgarisation comme il est indiqué ci-après :

(1) L'attention s'est fixée sur une *seule culture*, ou sur un *problème particulier* la concernant. (2) Les résultats étaient facilement *mesurables*, les sanctions en cas de mauvais résultats étaient lourdes et les résultats étaient *chiffrés* (par exemple, abaissement des niveaux d'incidence des ennemis des cultures, nombre de plants malades arrachés). (3) Les « *demandeurs* » influents intervenaient souvent, réclamant à haute voix des résultats les gouverneurs, les directeurs d'autres organismes, les maires, les associations d'exploitants et certains hauts fonctionnaires inquiets des graves répercussions d'une perte éventuelle de production sur les recettes fiscales de l'Etat ou sur l'économie agricole de la région. (4) *Le démarrage et l'achèvement* de la tâche étaient *clairement* stipulés, et se situaient généralement dans la période de quatre ans du mandat du gouverneur et parfois même dans les limites d'un cycle de production d'une année autrement dit, dans un intervalle nettement inférieur à la durée de cinq à huit ans de vie des projets de développement rural. (5) La concentration d'une intense activité du secteur public sur une culture dans une région particulière et pendant un temps limité a permis de garantir un bon *approvisionnement en intrants améliorés* si difficiles à obtenir dans des circonstances normales; en même temps, l'offre d'intrants étant devenue moins incertaine, les petits exploitants se sont montrés moins hésitants à s'adonner à cette culture. (6) L'*organisme* lui-même s'est senti encouragé, et investi d'une mission, en ayant à faire face à un problème aussi concret et dramatique avec la perspective de résultats sensibles et prévisibles. (7) L'*émulation* locale a contribué pour beaucoup à propager ces exemples d'information agricole et, d'une façon plus générale, au développement microrégional. S'il peut sembler que cette liste de traits distinctifs ne s'appliquait qu'aux campagnes contre les maladies et les ennemis des cultures, divers autres exemples de bons résultats présentaient au moins certaines de ces mêmes caractéristiques.

Les aspects mentionnés ci-dessus sont très différents de ceux qui caractérisent généralement la vulgarisation et la recherche. Le plus souvent, (1) la performance se mesure aux *intrants* nombre d'exploitants visités, nombre de cours donnés, nombre de parcelles de démonstration par opposition aux résultats, tels que les taux d'adoption de variétés améliorées ou d'accroissement des rendements; (2) les organismes travaillent sur un *vaste* programme de cultures et

d'activités, et pour des périodes *indéterminées*, sans aucune urgence pour l'introduction d'une variété améliorée ou une pratique particulière; (3) souvent, le secteur privé pas plus que le secteur public n'est à même de fournir les intrants améliorés dans de bonnes conditions, en temps voulu et à un coût raisonnable réduisant d'autant les possibilités de gain à en attendre. Les campagnes de lutte contre les maladies et autres exemples d'amélioration des résultats ont contribué, en quelque sorte, à redéfinir la tâche de la vulgarisation et de la recherche d'une manière qui a permis d'obtenir de bons résultats d'organismes dont la prestation sur un programme beaucoup plus large n'avait guère été concluante.

Conclusions et Recommandations

Les projets ont donné satisfaction lorsque (1) les organismes avaient acquis plus de moyens d'agir sur la qualité et le rythme de leur exécution, en partie en exécutant des tâches qui incombaient normalement à d'autres ou en les sous-traitant et en les supervisant; (2) les tâches étaient particulièrement « aisées », ou de nouveaux organismes et services pouvaient « se faire les dents » sur de premiers travaux faciles, ou le projet avait été modifié de manière à simplifier certaines tâches difficiles; (3) les incitations étaient telles que le gouvernement ou les bénéficiaires étaient prêts à fournir des fonds supplémentaires pendant l'exécution, ce qui a permis d'améliorer la qualité des projets; 4) des pressions s'exerçaient de l'extérieur, en particulier des « demandeurs » sur les organismes pour qu'ils se montrent plus responsables; et 5) il y avait une complémentarité habituelle entre l'action de l'Etat et celle des pouvoirs locaux la participation locale aidant à réduire les coûts et les retards, à rendre les organismes d'Etat plus responsables, et a susciter une plus grande utilisation de la main-d'oeuvre et des matières premières locales.

Bien que l'importance des *pressions au niveau de la demande* pour la qualité des résultats ne soit pas une découverte, la Banque et les autres bailleurs de fonds abordent généralement la conception des projets sous l'angle de l'offre, s'employant principalement à renforcer la capacité de certaines institutions. Bien que l'univers de la demande puisse sembler inaccessible aux chargés de projet, les cas observés offrent de nombreux exemples de la façon dont certaines institutions ont pu être soumises à ces types de pression au niveau de la demande. Voici deux suggestions particulières à cet égard :

- les « bons » gouverneurs et autres dirigeants élus pourraient être incités à appuyer davantage les projets en décomposant les périodes de planification et d'exécution en cycles de quatre ans coïncidant avec le cycle électoral. Ces dirigeants pourraient être autorisés à choisir sur une liste d'activités possibles que la Banque financerait comme le font du reste beaucoup de gouverneurs, n'apportant leur appui qu'à leurs composantes préférées et mobilisant parfois des fonds supplémentaires à leur intention. Il faudrait prévoir assez de souplesse pour permettre à un Etat de choisir l'alimentation en eau des zones rurales et un autre le crédit aux petits exploitants comme l'ont fait respectivement le Gouverneur de Sergipe et celui de Pernambouc. Cette situation contraste avec la conception actuelle des projets où, devant les nombreuses composantes et les longs délais d'exécution, les dirigeants élus finissent par se désintéresser, ou par utiliser les ressources du projet pour répondre à des besoins budgétaires à court terme pour s'acquitter de dettes politiques.

- Il conviendrait de soumettre les agents d'exécution aux effets de la demande en canalisant une part des fonds qui leur sont affectés par les « usagers » de leurs services pas seulement les groupes de bénéficiaires, mais aussi les organismes publics, les banques de développement et les municipalités. De même que les nouveaux chefs de projet sous-traitaient ce qu'ils ne pouvaient faire eux-mêmes ou obtenir de l'agent d'exécution, les demandeurs feraient appel aux organismes fournisseurs dans le cadre de contrats de service. Le financement des organismes fournisseurs par l'entremise des usagers permettrait également de conférer au projet les caractéristiques des expériences réussies : des tâches étroitement définies, des normes de performance mesurables et visibles et la claire application de pénalités en cas de mauvais résultats.

Il conviendrait de choisir les activités à financer et à attribuer à tel ou tel organisme en partie selon leur degré de *facilité ou de difficulté relative*. Parmi les exemples de tâches éventuelles « plus faciles » au moins à démarrer figurent les campagnes de lutte contre les maladies et les ennemis des cultures, la mise en place d'installations simples d'alimentation en eau des zones rurales et certaines formes d'acquisition de terres. Etant donné le nouvel engouement pour l'infrastructure rurale, il convient d'ailleurs de reconnaître que les organismes connus spécialisés dans l'infrastructure s'acquittent souvent très mal des tâches qui leur sont confiées par les projets de la Banque de ce type; d'autres institutions moins expérimentées ou moins spécialisées font souvent mieux. Cela incline à penser que ces activités devraient parfois être soustraites à leur cadre bureaucratique traditionnel, ne serait-ce qu'à titre temporaire, et être confiées à des organismes « inappropriés », voire à de nouvelles institutions *si* ces dernières, par sympathie ou sous l'effet de pressions extérieures, sont incitées à faire mieux.

En ce qui concerne les leçons à tirer du *transfert* en général, (1) la responsabilité d'un projet devrait être confiée à un *seul* organisme, que les tâches soient nombreuses ou non, qu'il s'agisse d'un organisme établi ou nouveau, ou

qu'il s'agisse d'un agent d'exécution ou d'un service de coordination; et (2) il conviendrait de donner à cet organisme les moyens politiques et financiers d'exécuter lui-même les tâches du projet ou de les sous-traiter à d'autres organismes publics, à des entreprises privées ou à des organisations non gouvernementales. Autrement dit, les leçons du transfert ne sont *pas* que : (1) la Banque en revienne à créer de nouveaux établissements parapublics puissants; *ni* que (2) les bureaux de projet (par opposition à d'autres organismes) soient nécessairement habilités à faire le travail eux-mêmes; *ni* (3) que le nombre des tâches à accomplir soit simplement réduit il est vrai toutefois que cela ne serait pas un mauvais début.

Si l'on se fonde sur ces constatations, les conclusions pratiques pour *la recherche et la vulgarisation* sont assez claires : (1) les projets devraient porter de préférence sur une seule culture ou sur d'autres interventions particulièrement ciblées, avoir un début et une fin clairement identifiables, et présenter des *résultats* chiffrables. S'il est vrai que la grande diversité des formes d'appui actuellement offertes est plus conforme à l'intérêt manifesté depuis peu pour la recherche sur les *systèmes* d'agriculture, elle est aussi difficile à gérer; cette forme d'appui convient mieux aux projets visant à renforcer un organisme *unique* sur une période prolongée comme dans le cas de l'appui apporté avec succès par la Banque depuis plusieurs années à l'entreprise parapublique de recherche agricole brésilienne EMBRAPA. (2) Les projets devraient financer la recherche et la vulgarisation du moins en partie par l'entremise des « demandeurs », car ceux-ci accordent plus de prix que les organismes de recherche à la recherche appliquée et à la diffusion. (3) Les projets devraient tendre à aider les centres de recherche à diffuser plus largement une ou deux de leurs principales réussites.

D'une façon plus générale, la Banque devrait (1) adopter une approche plus « urbaine » de ses projets ruraux comme elle l'a fait dans ses projets de « villes intermédiaires » au Brésil et ailleurs en recourant à des fonds de contrepartie et à d'autres incitations pour a) tirer parti des ressources et des capacités de développement existant à l'échelon local; et b) placer certaines fonctions à un niveau où elles s'accomplissent mieux; (2) s'attacher davantage à lier les prêts aux petits agriculteurs à la mobilisation de l'épargne rurale, ce qui pourrait l'amener à rechercher les projets axés exclusivement sur les institutions financières rurales et *non pas*, par conséquent, sur les projets de développement agricole; et (3) exploiter les innombrables possibilités de favoriser le transfert de la terre aux petits exploitants pour permettre une production agricole plus décentralisée, parallèlement à l'aménagement de routes et de réseaux d'irrigation.

Notas

1. Commentant une première version du présent rapport, le Secrétariat au développement régional du Cabinet du Président a souligné que ce rapport ne suit pas l'approche habituelle utilisée par la Banque mondiale pour l'analyse des projets qu'elle finance. Comme il est expliqué dans le texte, cette étude est intentionnellement non pas une évaluation des projets du Nord-Est, mais un examen de ces projets pour tenter de répondre à une question particulière et pour tirer des conclusions d'une utilité générale, hors du développement rural et hors de la Banque. Le Secrétariat aurait aimé également que diverses questions soient traitées plus à fond (le contexte économique, politique, social et culturel de la région et du pays; les liens qui existent entre l'examen de la question de la reprise et les questions de la gestion et de l'affectation des ressources entre diverses composantes; le rapport entre les bons résultats et les différents groupes sociaux tels que les propriétaires terriens, les squatters, les métayers, les fermiers; la relation entre la réussite fondée sur une seule culture et les questions de distribution sur les marchés, question sur laquelle le projet a été efficace en ce sens qu'il a consacré un plus faible pourcentage d'effort à l'administration). Nous ne pourrions partager davantage l'opinion que ces questions méritent un examen plus approfondi, que nous n'avons pu leur consacrer faute de temps et de ressources financières et parce que nous étions tenus par des considérations de longueur du rapport final. Nous reconnaissons qu'il s'agit de questions importantes, qui nécessitent un effort complémentaire d'évaluation, comme le suggère le Secrétariat, sur les projets conjoints de la Banque mondiale et du Gouvernement brésilien dans le Nord-Est. Le Secrétariat aurait aimé que les composantes où la coordination interinstitutions n'a *pas* donné de bons résultats fassent l'objet d'une enquête. Toutefois, nous n'avons pas analysé en détail les éléments non réussis dans ce rapport, notamment parce que nous l'avions déjà fait d'une façon plus générale dans d'autres évaluations, en particulier dans le rapport de 1988 du Département de l'évaluation rétrospective des opérations sur l'expérience (mondiale) du développement rural. Pour revenir plus précisément sur la préoccupation du Secrétariat, ce rapport décrit ce qui a bien fonctionné par rapport aux types d'échecs les plus fréquents par exemple, en ce qui concerne la fourniture de crédit en temps voulu pour les semis, le manque de collaboration entre la vulgarisation et la recherche, ou l'incapacité d'exécuter les projets ou certaines de leurs composantes dans les délais prévus. Un certain nombre de rapports d'évaluation rétrospective examinent ces problèmes à propos de certains projets. Cette étude ne saurait tenir lieu d'évaluation du portefeuille de projets, ou d'étude du Nord-Est brésilien, mais utilise un ensemble inhabituellement vaste de projets du même ordre pour donner des indications à la Banque et aux économistes du développement en général sur la conception efficace des projets d'assistance aux populations rurales pauvres. Le texte complet des commentaires du Gouvernement figure à l'Annexe 1.

2. Alagôas, Bahia, Ceará, Maranhão, Paraíba, Pernambouc, Piauí, Rio Grande do Norte, Sergipe et Minas Gerais. Voir note 3 au paragraphe 1.07, pour l'explication des raisons pour lesquelles l'Etat de Minas Gerais, qui ne figure pas dans le Nord-Est, a été inclus dans ces projets du Nord-Est.

3. Le Bureau régional souligne que la « seconde génération » de projets a eu redéfinie. Les leçons présentées dans ce rapport sont tirées des projets de la première et de la deuxième génération, tels qu'ils ont été exécutés à l'origine. Le Bureau régional a également souligné que « l'exécution des projets de la deuxième génération n'en est encore, au mieux, qu'à mi-parcours, et a subi de graves distorsions causées par les problèmes financiers, et les conclusions tirées de l'expérience de cette génération sont essentiellement sans rapport avec la conception des projets ».

4. Apoio para Pequenas Comunidades Rurais (Appui aux petites communautés rurales).

1. Introduction

In 1974, as part of a wider program targeted at poverty reduction in general, the Bank announced a bold new approach to reducing rural poverty and stimulating agricultural growth. Born out of dissatisfaction with the inability of past development efforts to reduce rural poverty and inequality, the "new style" rural development (RD) projects differed from, and supplemented, previous interventions in two ways. They targeted the poor directly with agricultural production services and subsidies. And they provided certain regions with a complete array of development investments, ranging from roads to agricultural credit to health—regions chosen for their agricultural potential and high concentration of small farmers. By 1986, twelve years later and after US$19.1 billion (current) of Bank commitments to RD worldwide, of which US$6.3 billion has been for "new style" area development projects, the new approach had fallen into disfavor. Myriad problems had plagued the implementation of the projects, and serious questions had been raised about their effectiveness at reducing poverty and increasing agricultural productivity. These concerns, outlined below, were laid out in a major review of the RD experience carried out by OED in 1987. [1]

Though targeted rural development deserved much of the criticism it received, some of these projects—or parts of them—performed well. Though these exceptions in themselves do not justify bringing this kind of RD project back in, they raise the question as to how some projects could have worked well with a design and in an environment now considered *not* conducive to good performance. More constructively, if certain projects or activities could stand the test of such adverse circumstances, they certainly must have some lessons to offer about improving the design of programs today. Though the Bank has largely abandoned the RD approach, it continues to devote major policy attention and resources to the same sectors, individually or in pairs, that were all linked together in RD projects—agricultural research and extension, rural finance, irrigation, farm-to-market roads, drinking water, health, education.

Because past evaluations of the RD experience have been more illuminating about the causes of failure than about the causes of success—as the above-noted OED review itself pointed out—they have thrown more light on what *not* to do than on what *to* do. This study seeks to do the opposite. It identifies patterns that ran across a variety of instances of better performance in a set of 23 RD projects in Northeast Brazil totaling US$3.3 billion (current). The Brazilian government financed 48 percent of this investment, and the Bank 42 percent (US$1.4 billion)—one of the Bank's most comprehensive RD programs (Table 1.1). The study asks what lessons these patterns reveal about project design and, more generally, about the role of the public sector in rural development. As the reader will see, the answers to this question do not add up to a case in favor of or against "integrated rural development," but are of relevance to a wide variety of more narrowly-conceived projects and sectors in which the Bank operates today.

The Experience with Integrated Rural Development

The Bank's "new-style" RD projects were a direct result of President McNamara's concern about rural poverty and income inequality, as expressed in his Nairobi speech of September 1973. They represented a break from the past in that they (1) *targeted small farmers*; (2) *"integrated"* several interventions in one project, instead of focusing on just one or a few sectors or activities or crops—including a variety of agricultural production services (credit, extension, research, marketing, seed production, input production and/or supply, microenterprise assistance), physical infrastructure (roads, irrigation, drinking water, rural electrification), social infrastructure (education and health), and sometimes, as in the Northeast projects, land interventions; (3) they were built on a concept of *"area development"* —with

Table 1.1: Northeast Brazil Rural Development Projects: Basic Information

Project	World Bank Loan		Value (US$ million)			Total Project (appraised)				
						Value (US$ million)				
	Number (1)	Date (2)	Current $ (3)	1988$ (4)	Deflator[b] (5)	Current $ (6)	1988 $ (7)	Percentage WB Loan in Total[c] (8)	Direct Benefic. Families 1000s[a] (9)	Project Area 1000s km2 (10)
POLONORDESTE										
Rio Grande do Norte	1,195	12/75	12.0	23.9	0.503	30.0	59.6	40.0	15.0	21.0
Minas Gerais I[d]	1,362	01/77	42.0	78.5	0.535	139.0	259.8	30.2	25.5	35.0
Ceará/Ibiapaba	1,488	04/77	17.0	30.8	0.552	42.2	76.4	34.2	5.8	4.8
Paraíba/Brejo	1,537	03/79	24.0	38.8	0.619	67.3	108.7	35.7	7.4	1.6
Bahia/Paraguaçu	1,589	05/78	37.0	62.3	0.593	106.6	179.7	34.7	17.0	60.8
Sergipe/Tab. Sul.	1,714	05/79	26.0	40.3	0.645	76.0	117.9	34.2	8.4	6.0
Pernambuco/Agr. Set.	1,728	05/79	40.0	62.0	0.645	116.7	180.9	34.3	15.5	10.8
Minas Gerais II	1,877	06/80	63.0	89.4	0.705	184.6	261.8	34.1	30.0	61.0
Ceará II	1,924	12/80	56.0	75.9	0.738	163.2	221.1	34.3	60.0	146.8
Piauí	2,015	04/81	29.0	37.6	0.772	84.4	109.3	34.4	11.3	24.3
Maranhao	2,177	05/82	42.7	52.0	0.821	122.2	148.8	34.9	38.8	50.7
Bahia II	2,269	04/83	67.8	79.5	0.853	173.4	203.3	39.1	45.0	76.6
Subtotal average[d]	12		456.5	670.9		1,305.6	1,927.5	35.0	279.8	499.4
			38.0	55.9		108.8	160.6	35.5	23.3	41.6
PAPP										
Sergipe	2,523	09/85	61.3	67.2	0.912	130.3	146.9	47.0	17.5	16.3
Rio Grande do Norte	2,524	04/85	61.4	67.3	0.912	136.2	149.3	45.1	35.0	
Bahia	2,761	09/86	171.0	182.7	0.936	356.2	380.6	48.0	80.0	265.6
Piauí	2,762	09/86	78.0	83.3	0.936	160.3	171.3	48.7	65.0	145.4
Pernambuco	2,718	03/86	92.0	99.6	0.924	188.4	203.9	48.8	73.0	62.0
Ceará	2,763	09/86	122.0	130.3	0.936	254.3	271.7	48.0	122.8	144.3
Paraíba	2,860	05/87	60.0	62.0	0.967	123.9	128.1	48.4	37.8	25.6
Minas Gerais	2,861	05/87	55.0	56.9	0.967	113.5	117.4	48.5	38.7	120.7
Maranhao	2,862	05/87	84.0	86.9	0.967	172.3	178.2	48.8	73.0	130.7
Alagôas	2,863	05/87	42.0	43.4	0.967	86.4	89.3	48.6	32.4	15.0
Subtotal average[e]	10		826.7	879.7		1,721.8	1,832.6	48.0	572.5	925.6
			82.7	88.0		172.2	183.3	48.0	57.5	102.8
State project total average[e]	22		1,283.2	1,550.6		3,027.4	3,760.1	42.4	855.0	1,424.9
			60.4	71.9		140.5	171.96	41.8	40.4	72.2
PAPP Land titling/res.	2,593	11/84	100.0	112.7	0.887	250.0	281.8	40.0	100.0	
POLONORDESTE/PAPP total	23		1,383.2	1,663.3		3,277.4	4,042.0	42.0	955.0	1,424.9

Source: All values taken from the original Staff Appraisal Reports (SARs), Projects Department, Latin America and Caribbean Regional Office, WB. For POLONORDESTE: World Bank (11/11/75; 12/28/76; 4/29/77; 5/19/78; 3/10/79; 5/15/79; 5/22/79; 5/30/80; 11/11/80; 4/16/81; 5/21/82; 4/1/83). For PAPP: WB (3/12/85; 4/8/85; 5/22/86; 9/26/86a; 9/26/86b; 9/26/86c; 5/26/87a; 5/26/87c; 5/26/87d).

a. Direct beneficiary families are those farm families that benefit directly from the agricultural components, such as research, land and marketing. Piauí includes direct beneficiaries who are fishermen. Indirect beneficiaries were not included because of double counting in the appraisal reports and inconsistency between reports as to types of indirect beneficiaries included.

b. IMF GNP deflator (1988 = 100), IMF (1989: 724). Year of deflator is based on the date of project appraisal, rather than the loan date. For those projects appraised in the first three months of a year, the deflator used was an average of the year of the appraisal and the prior year's deflator. Similarly, for projects appraised in the last three months of a year, the deflator is an average of that year and the subsequent year's deflator. The annual deflators are as follows: 1975, 0.488; 1976, 0.518; 1977, 0.552; 1978, 0.593; 1979, 0.645; 1980, 0.705; 1981, 0.772; 1982, 0.821; 1983, 0.853; 1984, 0.887; 1985, 0.912; 1986, 0.936; 1987, 0.967.

c. Percentages calculated on the basis of current US$; slight differences in percentages based on constant dollars due to rounding errors.

d. The Minas Gerais projects are located in a small drought-prone area of the state; because the state of Minas Gerais is not considered part of the Northeast region, it is not included in Table 1-5, which provides regional data.

e. Simple averages; weighted averages are not significantly different.

project areas being chosen for their concentrations of small farmers and their potential for agricultural development. Only by targeting small farmers and the poor in general, it was felt, could the bias of public-sector institutions toward the better-off farmers be reversed, as well as the tendency for income and landholding distributions to remain skewed, regardless of the robustness of growth.

Dissatisfaction with the RD projects, as expressed in various evaluation studies carried out by the Bank and other donors, focused on the following problems. The projects were (1) *too complex*, because of the large number of components and of executing agencies required to carry them out, and the need for them to coordinate with each other; (2) *not small or flexible* enough to allow the experimentation necessary for such a new approach; (3) granted *excessive subsidies* for agricultural inputs, particularly credit; (4) assumed incorrectly that a *"technical package"* for small-farm agriculture existed, that it could increase productivity substantially, and that the infrastructure necessary to deliver the productivity-increasing inputs would fall smoothly into place under the project; (5) suffered from the *lack of beneficiary participation* in design and implementation, with the result that farmers often did not adopt or have access to project services. In addition, (6) *increases in agricultural output* in project areas often could not be documented, and when they were, they often reflected more an increase in the area cultivated with traditional techniques than increased yields; and (7) the projects faced an uphill battle in trying to increase agricultural production and productivity in a policy environment that usually *penalized agriculture*—mainly in the form of overvalued exchange rates that reduced the returns to agricultural exports, tariff protection that increased the costs of agricultural inputs, and administered prices for farm produce below market levels.

The Bank has reacted to these problems in various ways. *First*, it is placing more emphasis on policy reform in the agricultural sector, as opposed to projects. *Second*, the concern about poverty has shifted from agricultural-production projects to investments now believed to be more effective at reaching the poor—namely, (1) investments in the "social sectors" —mainly education and health, (2) employment generating projects, (3) transfer expenditures, and (4) macro policy approaches to reducing the burden of structural adjustment on the poor. *Third*, project lending in agriculture has been retreating to the more "modest" approach of the pre-RD period—focusing on agriculture only and involving fewer agencies and components. *Fourth*, particular attention is now being paid to "rural infrastructure" as distinct from agricultural production services, given the association found in recent studies between infrastructure investments and the kind of agricultural growth that reduces income inequality between regions, at least, if not within.[2]

Northeast Brazil

The RD projects in the nine states of Northeast Brazil are particularly suited for an analysis of patterns running across several projects.[3] They are embedded in the same culture, language, politics, and policy environment, and they are confined to a region that is itself fairly homogeneous with respect to the rest of Brazil. As a whole, the region has a long history of persistent backwardness, and a strong sense of regional separateness (like the United States' South). In other ways, the region displays considerable variation. Forty percent of its rural population lives in a semiarid region (the sertão) of poor soils and subject to periodic drought—in contrast to distinct microclimates that are more humid and have better soils—such as higher tablelands, hilltops, and damp valleys. The Northeast-project areas contained this diversity—from humid to arid and from good soils to poor—except for the exclusion of the humid coastal region (see below).

With its inception in the mid-1970s, the Northeast program has a 15-year history that is longer than that available to most evaluators, as well as representing a major commitment by the Brazilian government and the Bank. The program also includes the incorporating of learning from a "first generation" of projects designed in the mid- and late-1970s, into a second generation designed in the mid-1980s. Among Bank RD projects, moreover, the performance of the Northeast projects was not unusually good or bad; rates of return for four of the projects ranged from 8 percent to 13 percent (Table 1.2)—roughly the same as the average of 10 percent for the 192 rural development projects reviewed by the Bank in 1987 (World Bank 10/16/87:37). Though the Brazilian Northeast has its own peculiarities, finally, the problems encountered by the projects were quite similar to those that characterized RD projects worldwide.[4]

Politics and the attempts to alleviate poverty in the Northeast have been influenced in many ways by the periodic natural disasters that afflict the semiarid region—droughts and, to a lesser extent, excessive rains. The last drought extended for five years of the implementation period of the first-generation projects (1979–83); floods followed in 1984 and another drought in 1987. To combat the effects of the 1979–83 drought, the central government spent emergency funds amounting to more than three times the expenditures on the Bank-funded projects during the same period.[5] Though it may seem remarkable that anything at all was accomplished with this kind of adversity, these kinds of natural disasters, and the vulnerability of the poor to them, are characteristic of the environment facing public-sector institutions in many of the poor regions of the world.

Northeast Brazil has 41.4 million inhabitants (29 percent of the Brazilian total), and a land area of 1.5 million square

Table 1.2: Northeast Brazil Rural Development Projects: Appraised and Actual Economic Rates of Return

Project	Appraised ERR[a]	Actual ERR[b] %	Time Period of ERR (yrs)	Ratio of Appraised to Actual
POLONORDESTE				
Rio Grande do Norte	15.0%	8.0	20	0.53
Ceará/Ibiapaba	19.0%	n.a.		
Paraíba/Brejo	32.0%	n.a.		
Bahia/Paraguaçu	15.0%	10.7	15	0.71
Sergipe/Tab. Sul	27.0%	13.2	25	0.49
Pernambuco/Agr. Set.	22.0%	n.a.		
Ceará II	19.0%	n.a.		
Piauí	20.0%	10.6	20	0.53
Maranhão	22.0%	n.a.		
Bahia II	16.0%	n.a.		
Average	20.7%	10.6		0.57

a. Source: same as Table 1.1.
b. Source: same as Table 2.1. Project Completion Reports calculated rates of return for only four of the eight projects; data were not sufficient to calculate the rates in the remaining four cases. As of August, 1990, Project Completion Reports and actual data were not available for Maranhão and Bahia II.

kilometers (18 percent of the total). The size of the nine states varies greatly, with the population of the largest, Bahia, being eight times larger than that of the smallest, Sergipe (Table 1.3). Rural population densities average 13 persons per km^2 (Table 1.4). The Northeast is one of the poorest regions of the world, with 44 percent of its total population living below absolute poverty and 60 percent of its rural population (Table 1.5). Though the region has 28 percent of Brazil's population, it has almost double that share (56 percent) of the country's poor. The average monthly income of Northeast families is roughly half that of the rest of the country (2.61 minimum wages versus 4.83 for Brazil), a relationship that has not improved since 1970 (Table 1.5). Mean monthly income of the employed labor force in rural areas is only 62 percent that of Brazil, a difference that has worsened since 1970. With respect to land in farms, the bottom 53 percent of farms (0 to 20 hectares) account for 6 percent of total farm area, and the top 15 percent of farms (above 100 hectares) for 75 percent of farm area. (These last measures are no worse than those for all Brazil.) Only 6 percent of rural Northeast households have piped water (compared to 27 percent for all of rural Brazil) and

Table 1.3: Northeast Brazil: Population and Area by State[a]

State	Total Population 1000s (1)	Percentage of Regional Total (2)	Rural Population 1000s (3)	Percentage of Regional Total (4)	Total Area 1000s km^2 (5)	Percentage of Regional Total (6)
Alagôas	1,982.6	5.7	1,006.1	5.8	27.7	1.8
Bahia	9,454.3	27.2	4,794.0	27.8	560.0	36.4
Ceará	5,288.3	15.2	2,477.9	14.4	146.8	9.5
Maranhão	3,996.4	11.5	2,741.2	15.9	324.6	21.1
Paraíba	2,770.2	8.0	1,321.2	7.7	56.4	3.7
Pernambuco	6,142.0	17.6	2,358.0	13.7	98.3	6.4
Piauí	2,139.0	6.1	1,241.0	7.2	250.9	16.3
Rio Grande do Norte	1,898.2	5.5	783.0	4.5	53.0	3.4
Sergipe	1,140.1	3.3	522.3	3.0	22.0	1.4
Regional Total	34,811.1	100.0	17,244.7	100.0	1,539.7	100.0

Source: FIBGE (1985)
a. Minas Gerais is not included in this table because, though three of the projects were located there and the state is contiguous with the Northeast region, it is not considered part of the Northeast—except for a small drought-prone area where the Bank-funded project is located. Total population of the state of Minas Gerais is 14.6 million; project area population was 1 million under POLONORDESTE and 1.2 million under PAPP. The total area of Minas Gerais is 587,200 km2.

Table 1.4: Northeast Brazil: Rural Population Densities by State and by Project Area

State	Rural Population Density[a] (persons per km^2) State[b] (1)	Project Area[c] (2)	Year[d] (3)
POLONORDESTE			
Rio Grande do Norte	15.3	12.8	1970
Ceará[(e)]	19.9	17.5	1970/80
Paraíba	27.8	91.4	1976
Bahia[(e)]	8.3	10.8	1970/80
Sergipe	23.0	25.1	1976
Pernambuco	23.9	46.8	1970
Piauí	4.8	15.5	1975
Maranhão	8.5	18.2	1980
Simple average	16.4	29.8	
PAPP			
Sergipe	23.7		1985
Rio Grande do Norte	14.8		1985
Bahia	8.6	8.6	1980
Piauí	4.9	5.4	1980
Pernambuco	24.0		1985
Ceará	16.9	16.6	1980
Paraíba	23.4		1980
Minas Gerais	7.5	5.2	1980
Maranhão	8.4	9.4	1980
Alagôas	36.3		1980
Simple average	13.2	9.1	

a. Rural population divided by total area; data on rural area not available, so that these data are underestimates.
b. Source: FIBGE (various years).
c. Source: same as Table 1.1. A "blank" indicates that the data were not available.
d. The year used as a base year for calculating population densities, as detailed in the Staff Appraisal Reports (SARs). 1970 and 1980 are census years; figures from other than census years are estimates based on the census. Years vary in order to be consistent with the data on population in the project area taken from the SARs.
e. Ceará and Bahia are calculated as a simple average of the population density in 1970 referred to in the SAR for the first Ceará and Bahia projects and the population density in 1980 referred to in the SARs for the second projects in those states.

only 22 percent have at least a basic sanitary facility like latrines (47 percent for all of rural Brazil); only 34 percent of households (rural and urban) have electricity, compared to 60 percent for Brazil (Table 1.6).

Indicative of these difficult conditions, the rate of regional net emigration from the Northeast is the highest for Brazil—20 percent in comparison to 16 percent for Brazil; the rate of net in-migration is the lowest—7 percent and 15 percent for Brazil.[6] Though much attention has focused on migration out of the rural Northeast as a sign of its poverty, *rural-urban* migration rates are no higher than those for the highly developed and agricultural southern region of Brazil. Finally, whereas the absolute number of rural inhabitants in all other regions of Brazil declined for the first time during the 1970—80 period (by 6 percent), the Northeast was the only region in which the rural population still grew (by 5 percent). With Brazil's population now 70 percent urban, the Northeast's is 50 percent urban, though its urban population has been increasing as rapidly as that of the rest of the country.

Though some of the most conspicuous aspects of the history of Northeast public interventions in the countryside relate to emergency responses to the drought, 60 percent of the region's rural population lives outside the drought area—in the humid coastal zone (*zona da mata*) and the *agreste*, the ecologically diverse area between the humid coast and the semiarid backlands. The agriculture and politics of the humid zone, where one third of the region's population lives and six of its nine capital cities lie, have been dominated by sugar (and in southern Bahia, cacao) for more than a century. Partly for this reason, the Bank-funded projects are located outside this area, in the semiarid and *agreste* zones.

The economic life of the semiarid zone (rainfall averaging 700 mm) revolves around extensive livestock grazing by larger farmers and the growing of food crops by their tenants or by small-farm owners—corn, upland rice, beans, and cassava (the latter doing better with low moisture than the others). The single most important cash crop of the semiarid zone until recently has been cotton—a drought-resistant long-fiber perennial variety jointly produced with extensive livestock and interplanted with annual food crops by sharecroppers. More recently, cashew has been growing in importance, including among small farmers, though its share in total Northeast agricultural output is still not significant. In addition to the food crops produced in the semiarid zone, the transitional zone of the *agreste* also produces fruits and vegetables in some places, depending on the availability of rainfall, good soils, and river water for irrigation. This is also true of certain highland areas in the semiarid zone itself.

The Projects

Since 1975, the Brazilian government has committed US$3.3 billion (current) for lending to targeted rural development in the Northeast, for which it borrowed US$1.4 billion (42 percent) from the Bank (Table 1.1). This package included (1) ten first-generation projects (POLONORDESTE) in nine states (including three follow-on projects in the states of Ceará, Bahia, and Minas Gerais) approved over the 1975—83 period, and (2) nine second-generation projects (PAPP) in the same states and a first project in the

Table 1.5: Northeast Region and Brazil: Distributional Indicators

Indicator		*Northeast*	*Brazil*	*Ratio of Northeast to Brazil*
Average Monthly Family Income				
in Multiples of the Minimum	1970	1.31	2.56	0.51
Wage of 8/80[a]	1980	2.61	4.83	0.54
Rural Mean Monthly Income of				
Employed Labor Force	1970	1,995	2,950	0.68
(Constant 1980$Cr)[b]	1980	4,141	6,668	0.62
(%)		107.0	126.0	0.85
Percentage Change (1970–80)	1970	0.404	0.440	0.92
Gini Coefficient	1980	0.470	0.554	0.85
Percentage of Households Below				
Poverty Line (1987)[c]				
Urban and Rural		44.2	23.3	1.90
Rural Only		60.1	46.3	1.30
Percentage Share of Total Family Income:[d]				
In Bottom 50% of Households	1970	14.1	12.1	1.17
	1980	11.9	12.2	0.98
In Top 10% of Households	1970	49.7	48.3	1.03
	1980	50.0	47.0	1.06
Gini Coefficient	1970	0.593	0.608	0.98
	1980	0.614	0.597	1.03
Distribution of Land in Farms				
(Percentage of Total) (1985)[e]				
Farms < 20 Hectares				
Percentage of Total Farms		52.9	66.9	0.79
Percentage of Total Land		5.5	5.7	0.96
Farms > 100 Hectares				
Percentage of Total Farms		14.6	9.8	1.49
Percentage of Total Land		74.4	78.8	0.94

a. Hoffmann (1986: 70).
b. Graham et al. (1987: 26).
c. Fox (1990: 10, T.4).
d. Hoffman and Kageyama (1984: 21), cited in Hoffmann (1986: 71).
e. World Bank (5/18/89: 98, T.A.2).

Table 1.6: Northeast Region and Brazil: Various Indicators

Indicator	Northeast	Brazil	Northeast as Percentage of Brazil	Year of Data
Total Area, Millions of km2 (p. 20)[a]	1.5	8.5	17.6	1989
Population:				
Total, Millions (p. 75)[a]	42.0	147.4	28.5	1989
Rural, Millions (p. 77)[a]	17.8	37.7	47.2	1989
Economically Active Population (EAP):				
Ten Years and Older, Millions (p. 132)[a]	15.2	57.4	26.5	1987
In Agriculture, Millions (p. 133)[a]	6.0	14.1	42.6	1987
Manufacturing Output, Cr$ Millions				
Value Added[a]	10.4	117.3	8.8	1984
Total Value of Production (p. 378)[a]	25.1	278.6	9.0	1984
Gross Regional Product[b]			14.5	1980
Agricultural Output, 1977, 1979–81[c]			21.6	
Head of Cattle, Millions (p. 336)[a]	24.0	135.7	17.7	1987
Electric Power Consumption				
1000s of GWH (p. 455)[a]	28.4	192.1	14.8	1987

Other indicators

Indicator	Percentage in Northeast	Percentage in Brazil	Ratio of Northeast to Brazil	Year of Data
Rural Population as Percentage of Total[a]	42.4	25.6	1.66	1989
Sectoral Shares of GDP (Percentage of Total)[d]				
Agriculture	16.3	10.0	1.63	1980
Industry	30.3	38.3	0.79	1980
Services	53.4	51.7	1.03	1980
Rural Households with:				
Basic Sanitary Facilities[e]	21.6	47.2	0.46	1985
Piped Water	5.7	27.0	0.21	1985
Dwellings (Urban and Rural):				
With Electricity[f]	34.3	60.2	0.57	1980
Percentage of Population Literate				
(Five Years and Older)[a]	54.6	74.2	0.74	1987

a. FIBGE (1989).
b. May (1986: T.2).
c. May (1986: T.5).
d. World Bank (5/18/89: III, T.A.1.9).
e. World Bank 95/27/88: II, T.55; T.56).
f. May (1986: T.3).

state of Alagôas, approved over the 1985–87 period, and a regionwide land project (US$250 million).[7] Total appraised cost was US$1.3 billion for the first-generation projects, and US$2.0 billion for the second. Bank loans accounted for 35 percent of total costs in the first-generation projects and 48 percent in the second. Though the second-generation

Table 1.7: Northeast Brazil Rural Development Projects: Appraised Expenditures by Component, POLONORDESTE and PAPP
(US$ current millions)

Project Component [a]	POLONORDESTE [b] Total Value	POLONORDESTE [b] Component as Percentage of Baseline Costs	PAPP [c] Total Value	PAPP [c] Component as Percentage of Baseline Costs
Rural Credit	179.0	23.2	427.2	30.0
Feeder and Access Roads	151.6	19.7		
Rural Extension	104.4	13.6	345.1	24.2
Land Related Activities [d]	121.6	15.8		
Project Administration	45.4	5.9	139.9	9.8
Water Resources/Supply [e]	40.8	5.3	164.8	11.6
Education and Training	40.2	5.2		
Health and Other	30.6	4.0		
Other Ag. Services	23.5	3.0		
Marketing Activities	16.6	2.2	33.8	2.4
Agricultural Research [f]	16.7	2.2	90.4	6.4
APCR (Support/Small Comm.) [g]			221.9	15.6
Sub-total: Baseline Costs	770.3	100.0	1,423.1	

Source: All values taken from the original Staff Appraisal Reports (SARs), Projects Department, Latin America and Caribbean Regional Office, World Bank. For POLONORDESTE: World Bank (11/11/75; 12/28/76; 4/29/77; 5/19/78; 3/10/79; 5/15/79; 5/22/79; 5/30/80; 11/11/80; 4/16/81; 5/21/82; 4/1/83). For PAPP: World Bank (3/12/85; 4/8/85; 5/22/86; 9/26/86a; 9/26/86b; 9/26/86c; 5/26/87a; 5/26/87c; 5/26/87d).

a. A "blank" indicates no funds included in that category.

b. Includes ten POLONORDESTE projects in the eight states of Rio Grande do Norte, Ceará (two projects), Paraíba, Bahia (two projects), Sergipe, Pernambuco, Piauí, and Maranhão. For POLONORDESTE projects only: because the component categories and sub-categories vary somewhat from project to project, some categories have been recombined to facilitate comparison across projects. See footnotes to Table 8 for an explanation.

c. Includes ten PAPP projects in the ten northeastern states (including Alagôas and Minas Gerais in addition to the eight states above).

d. In PAPP, land activities were combined in a separate region-wide land titling project (US$250 million).

e. In PAPP, the water resources component funded primarily irrigation, but included some funds for inland fisheries and drinking water supply.

f. The PAPP total in this category includes US$1.7 million for an environmental protection component in the Maranhão project.

g. The APCR component (Apoio para Pequenas Comunidades Rurais) was added under PAPP; it is also referred to as the community-participation component.

projects were larger than the first, they were spread more thinly. The average number of beneficiary households per project and the average size of the project area more than doubled—from 23,000 direct-beneficiary households per project to 58,000, and from 42,000 km^2 to 103,000 km^2 (Table 1.1).

The first-generation projects included roughly a dozen different kinds of components—ranging from agricultural credit and extension through feeder roads and electrification to health and education, though any one project would not include all of them. The staples of each project were credit (23 percent), land-related activities (16 percent), feeder roads (20 percent), and agricultural extension (14 percent)—accounting for 72 percent of appraised costs (Table 1.7). In an attempt to reduce the complexity of the projects and focus more exclusively on agricultural production, a second generation of projects eliminated health, education, and roads—as well as some smaller components (micro-enterprise credit, electrification, marketing). Credit (30 percent), extension (24 percent), and a new community-participation component (16 percent) accounted for 70 percent of appraised expenditures; associated land-related activities were unified in the separate regionwide land-tenure project (an additional 16 percent).

Typical project organization involved the Bank and several levels of the Brazilian government—the federal government ministries, the Northeast regional development authority, semi-official banks, and the state-level project units and executing agencies. The project-coordinating units, set up in state departments of planning or agriculture, were in charge of designing the projects and supervising their implementation, but had neither executing responsibilities nor the formal power to grant funds or withhold them from the executing agencies—a subject treated in Chapter 2; an exception was the community-participation component (APCR) [8] in the second-generation projects, described momentarily, in which the project units shared formal implementation responsibilities with rural labor unions and some farmer cooperatives. Municipal governments, though often represented on *ad hoc* councils that vetted the APCR sub-projects, had no formal place in the projects as such, but sometimes ended up making important contributions that were not anticipated (Chapters 2 and 3).

The community-participation component, at US$222 million and 16 percent of total second-generation costs, represented the most significant attempt of the Bank to make the implementation of its RD projects more participatory. The APCR fund, with the assistance of an average of 36 community agents and supervisory staff per state (Table 1.8), makes grants of up to US$10,000 to associations formed in communities of less than 5,000 inhabitants: (1) 65 percent for community-owned ventures like grain-milling facilities, seed banks, input-supply stores, and storage facilities, (2) 20 percent for small works projects (road repair, community laundries, public toilets), and (3) 15 percent for institution-building in community organizations, used mainly by the rural labor federations for training. A regional development commission, which meets several times a year to discuss implementation issues and approve the annual operating plans of the project units, also represents a major participatory innovation in that a third of the commission's representatives come from the state rural labor-union federations—a first in Brazil. (Another third are project-unit directors, and another third represent various federal ministries.)

By late 1988, disbursements under the first-generation projects were completed, but approximately 40 percent of total loan value and of total project costs remained undisbursed (Table 1.9). This was due to problems of increasing inflation and fiscal crises, delays and shortfalls in the transfer of counterpart funding by the central government to the states, and cutbacks in public-sector personnel. Implementation therefore took longer than expected—up to nine years, as opposed to the expected five years. By the end of 1988, about 10 percent of the second-generation loans were disbursed, representing approximately half of the disbursements expected by that date at appraisal.

Table 1.8: Northeast Brazil Rural Development Projects: Number of New Extension Staff by Project, POLONORDESTE and PAPP

	Appraised[a]		*Actual*[b]	
Project	*Agricultural Extension (1)*	*APCR*[c] *(2)*	*Agricultural Extension (3)*	*Appraised as % of Actual (2/1)*
POLONORDESTE				
Rio Grande do Norte	n.a.		141	n.a.
Ceará/Ibiapaba	n.a.		225	n.a.
Paraíba/Brejo	62		77	124.2
Bahia/Paraguaçu	223		205	91.9
Sergipe/Tab. Sul	61		85	139.3
Pernambuco/Agr. Set.	172		179	104.1
Ceará II	378		556	147.1
Piauí	130		155	119.2
Maranhão	133		n.a.	n.a.
Bahia II	211		n.a.	n.a.
Total	1,370		1,623	121.0
PAPP				
Sergipe	225	18		
Rio Grande do Norte	390	25		
Bahia	915	90		
Piauí	530	23		
Pernambuco	640	42		
Ceará	846	46		
Paraíba	720	18		
Maranhão	240	24		
Minas Gerais	380	32		
Alagôas	280	18		
Total	5,165	357		

a. Source: same as Table. 1.1.
b. Source: same as Table 2.1. Actual data not yet available for PAPP.
c. APCR is Support to Small Rural Communities (Apoio para Pequenas Communidades Rurais).

Table 1.9: Northeast Brazil Rural Development Projects: Indicators of Completion
(US$ current millions)

Project	Years to Completion		Expenditures[a]					
			World Bank Loan			Total Project		
	Expected Years[b]	Actual Years[c]	Appraised[b]	Actual[c]	% Actual to Appraised	Appraised[b]	Actual[d]	% Actual to Appraised
POLONORDESTE								
Rio Grande do Norte	5.0	9.0	12.0	11.2	93.3	30.0	30.3	101.0
Ceará/Ibiapaba	5.0	8.5	17.0	9.1	53.5	53.1	23.6	44.4
Paraíba/Brejo	6.0	8.5	24.0	11.5	47.9	67.3	24.7	36.7
Bahia/Paraguaçu	5.0	7.5	37.0	26.4	71.4	106.6	70.5	66.1
Sergipe/Tab. Su.	5.0	6.5	26.0	10.1	38.8	76.0	32.4	42.6
Pernambuco/Agr. Set.	5.0	7.5	40.0	27.1	67.8	116.7	103.1	88.3
Ceará II	5.0	7.0	56.0	48.2	86.1	163.2	86.7	53.1
Piauí	5.0	5.5	29.0	17.0	58.6	84.4	36.3	43.0
Maranhão	5.0	6.5	42.7	29.9	70.0	122.2		
Bahia II	5.0	5.5	67.8	18.9	27.9	173.4		
Subtotal	51.0		351.5	209.4		993.0	407.6	
Average[e]	5.1	7.2			59.6			58.5
PAPP								
Sergipe	8.0		61.3			146.9		
Rio Grande do Norte	8.0		61.4			153.6		
Bahia	8.5		171.0			385.5		
Piauí	8.5		78.0			173.5		
Pernambuco	8.5		92.0			203.9		
Ceará	8.5		122.0			275.2		
Paraíba	8.5		60.0			128.1		
Minas Gerais	8.5		55.0			113.5		
Maranhão	8.5		84.0			178.2		
Alagôas	8.5		42.0			89.3		
Subtotal	84.0		826.7			1,847.7		
Average[e]	8.4		82.7			184.8		

a. A "blank" indicates that data are not available.
b. Source: same as Table 1.1.
c. Source: World Bank (8/31/88).
d. Source: same as Table 2.1.
e. Simple averages; weighted averages are not significantly different.

Methodology

Research for this study was carried out over the period of a year (1988—89)—including two weeks at Bank headquarters in Washington, D.C., three five-week field stays in the Northeast by the author, and a year in residency there by a research assistant involved in follow-up interviews. In addition to time spent in Brasília (one week) and Recife (two weeks), where the Bank has an office and where the Northeast Regional Development Authority (SUDENE) is headquartered, five of the nine project sites were chosen for visits of two weeks apiece, and for the following reasons:

- *Sergipe*, site of the POLONORDESTE project in the *Tabuleiros Sul* region, was considered one of the two most successful projects in terms of agricultural development (oranges, passion fruit, cassava), and to have one of the most competent project-coordinating units;
- The *Ibiapaba* highlands of Ceará, the site of the first POLONORDESTE project in the state, was the other "successful" case of agricultural development (tomatoes);
- *Bahia* had been more recently successful under the PAPP project (along with Ceará and Maranhão) in carrying out a large program of expropriation (roughly 300,000 hectares apiece) and settlement of landless and near-landless farmers, and in carrying out a small-irrigation program for landless farmers in the *Irecê* region (vegetables);
- *Piauí*, where the program of land transfer carried out through the purchase of 200,000 hectares under the POLONORDESTE project is now considered to be a "model" of successful land transfer by the Bank (World Bank 1990a:65); and
- *Pernambuco*, recently the most successful state in getting credit to small farmers, and where the project unit—until recently mediocre—has been carrying out innovative work with highly focused interventions in small-farm agriculture.

Also useful were a series of case studies prepared for EDI on certain aspects of the Pernambuco and Bahia projects: (1) the program of small irrigation in the *Irecê* region of Bahia, and the decision of the project unit to take the component away from the state irrigation and extension agencies and hand it over instead to the local coop; and (2) the *Pernambuco* project unit's interventions in small-farm agriculture, financed partly out of funds meant originally for the community-participation component. Beteta also prepared two case studies for EDI: on the pros and cons of creating a new rural water agency in *Sergipe* (COHIDRO) vs. working with the existing water agency; and on hard choices made in the implementation of the agrarian-reform projects in Bahia. Because the decisions around all these changes were difficult and provoked controversy, EDI chose them as good material for a forthcoming volume of case studies for teaching (Batt 1990a, 1990b; Beteta 1990a, 1990b).

Through extensive interviewing of Bank staff and review of project files, I initially identified various instances of better performance, together with the nature of the problems against which these cases stood out. Though this initial investigation led to the choice of the five above-mentioned projects to be looked into carefully, the process of identifying "what worked best" continued throughout the course of the research, and set the stage for the questions asked subsequently in all interviews. Each time someone named a project or a component as working well, I asked a series of linked questions as to how the better-performing agency or component had been able to get around the problems that typically afflicted these and other RD projects—shortfalls and delays in the receipt of budgeted funds, foot-dragging by the executing agencies or inappropriateness in their approaches, the inability of extension and research to coordinate their activities, meddling by politicians and other influential persons, lack of sympathy of branch-bank managers for lending to small farmers, the difficulty of getting the results of agricultural research widely disseminated, the dependence of agencies on other uncooperative agencies to coordinate their work. I posed the question about "what worked best" as much to field staff on the ground in project areas, and beneficiaries, as to Brazilian and Bank officials familiar with all of the projects.

Defining "success" or, more accurately, "better performance," turned out to be more difficult than originally expected. Originally, I assumed that particular agencies, projects, or project components would be found to have worked consistently "better." Interim results, however, required some rethinking:

- People talked about *episodes* of good performance that had come and gone, as distinct from consistently "good" agencies, components, or projects. This raised further questions about how a seemingly good agency could suddenly turn "bad," or how a chronically weak agency could suddenly produce a burst of good performance.
- When people had nothing good to say about the Bank-funded projects, they were asked if they could identify any similar interventions that *had* worked better, and why; their responses usually involved the same agencies and sometimes even the same persons that carried out the Bank-funded projects.
- A similar category of cases resulted from questions asked of farmers and research and extension agencies about "the most widely disseminated" research result they had seen—that which had had the greatest effect on small-farmer productivity and agriculture in the region.
- Bank staff and Brazilians often attributed the successful agricultural development associated with the Ibiapaba

and Tabuleiros Sul projects to a dynamic that had started *before* the projects. (Two similar cases, less frequently cited, were the expansion of bananas under the Brejo project in Paraíba, and of vegetable farming in the Agreste Setentrional project in Pernambuco.) These interpretations led to an exploration of the period prior to the project to find out what was driving the earlier phase of agricultural dynamism, the nature of public-sector action in that prior period, and the direction given subsequently to that development by the project. Many interpreted these prior periods of growth as meaning that the project could not take credit for what happened because it was "so easy." But this interpretation begged the question of what was the best way for projects to identify and link up to such "easy" expansions in progress, and of whether such areas are a better choice for the siting of projects (Chapter 4).

The cases of better performance, in sum, fell into the following categories: (1) particular projects and (2) particular components—both often bracketed within particular episodes of time; (3) public-sector interventions similar to those of the projects but not funded by them—though often overlapping with them; and (4) public actions in areas that were growing successfully before the Bank-funded project started. Unfortunately, little data were available on the economic and social impacts of the Northeast projects. Yield data were generally not available for project-assisted farmers versus non-project farmers, or for the project area versus the non-project areas, or for before the project versus after. With respect to impact, then, it was difficult to form an impression of what had worked and what hadn't that was independent of the qualitative reports from interviews, Bank supervision reports, and other studies. Though this represents a less than ideal basis for judgment, there was nevertheless a surprising consistency in the reports of those interviewed about what was working and what was not.

Care had to be taken in interpreting exactly what the consistently "good grades" given to some projects and some types of components meant. Sometimes they reflected more on implementation than on impact—mainly, the activity got carried out as planned and on time, or even before schedule. But this in itself represents a considerable accomplishment, given that many such projects often got carried out poorly or not at all. Conversely, people sometimes ranked certain interventions highly on impact that had not been carried out well or sustained, at least according to supervision reports—health and education were prime examples. This was surprising also because health and education had been such small components—5 percent and 4 percent respectively; and they had been excluded from the second-generation projects partly because their "poor" performance caused the Bank to decide that these sectors should be treated in separate sectoral projects. (For various reasons, the latter never materialized.)

Separating out good impact from other things often proved difficult. Many said that roads, electrification, and drinking water had, like health and education, a much "higher impact" than the agricultural production services that were the centerpiece of both sets of projects. This was surprising because these particular infrastructure investments were minor in the first-generation projects—except for roads (20 percent)—and had been eliminated almost completely from the second. Later in the 1970s, moreover, some critics of the targeted projects had considered rural-infrastructure components inappropriate because (1) elites seemed to benefit more than proportionally, (2) tenant farmers were often evicted as a result of increased land values following the infrastructure investments, and (3) investments in roads and electrification in particular were already well-funded because of the strong support they elicited from politicians and influential private contractors. When the second-generation projects were being negotiated, finally, the Brazilian central government turned down a Bank request to include funds for spot improvements and maintenance of roads because it (the central government) did not want to fund expenditures that it saw as falling solely within the responsibility of states and municipalities. For all these reasons, the second-generation projects excluded rural infrastructure—except for some irrigation (8 percent) and water supply (2 percent).[9]

It is tempting to interpret the "nostalgia" of the Northeasterners for the infrastructure investments of the earlier projects as confirming the "new wisdom" about the importance of rural infrastructure to equitable rural development. But the high rankings given to infrastructure were caused, in part, by factors other than impact—like the greater conspicuousness of these investments, and their political popularity and public goodness. In some ways, moreover, these comparative rankings revealed more about the greater difficulty of carrying out the agricultural components in comparison to infrastructure, than about their relative impacts. Also, data generated by Bank evaluations of the projects were not sufficient for forming a judgment about relative impact.

A few caveats on what this study does *not* do. First, it does not analyze macro policy issues like overvaluation of exchange rates and other policies affecting relative prices of agricultural output, or subsidization of agricultural credit and other inputs.[10] Second, it does not attempt to judge the strategy of the Brazilian government, or the Bank, toward reducing poverty in Northeast Brazil.[11] Third, though the study makes some critical judgments about the Bank—to the extent that its programs diverge from some of the patterns found to run across the cases of better performance—

it is not a general evaluation of the Northeast projects or of RD worldwide.

The review is organized in the following form. Chapter 2 analyzes the common traits of the better-performing agencies or episodes, across various types of components and activities. Chapter 3 discusses cases in which additional resources were mobilized that were unanticipated at appraisal, and in a way that made the projects work better—in rural infrastructure projects, and in credit. Chapter 4 presents another set of such cases in the area of land transfer. The cases of Chapters 3 and 4 are discussed in terms of the incentives they provided for resource mobilization and better performance, as well as their lessons about how to improve performance in land transfer, credit, and infrastructure activities. Chapter 5 concentrates on the lessons to be learned regarding agricultural research and extension, and agricultural development in general, from a set of cases of widespread dissemination of productivity-increasing practices and varieties. It also ties together some of these findings with those of the previous chapters.

Notes

1. World Bank (10/16/87). World Bank documents without named authors are cited in the References under "World Bank" and chronologically by date; authored Bank papers are cited alphabetically by author together with all other references.

2. For example, World Bank (1990a), Ahmed and Hossain (1988), Barnes and Binswanger (1986), Binswanger et al (1989).

3. The states are Alagôas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe, and Minas Gerais. The state of Minas Gerais is not part of the Northeast, though contiguous with it and including a drought-prone area that belongs to the Northeast "drought polygon." Minas belongs politically and economically to the much more developed center-south of Brazil, and does not identify regionally with the Northeast. For this reason, the Minas projects were not visited for this study, although many of Minas' drought polygon problems are similar to those of the Northeast. The Minas projects, however, are considered an integral part of the PAPP and POLONORDESTE program and are therefore included in the tables referring to the projects, but not to regional indicators.

4. For a comprehensive review of the problems and achievements of the first-generation projects, see WB (1983).

5. From 1983 SUDENE data cited in Livingstone and Assunção (1987: 120, T. 12.1). For treatments of the drought and public policy in the Northeast, see Hall (1978), Hirschman (1963), Livingstone and Assunção (1987, 1989), Magalhães (1989).

6. Moura and Santos (1986). Net emigration is the total number of those born in a region and living outside, divided by the total number currently in the region; net in-migration is the opposite. For other works on Northeast migration, see Carvalho and Wood (1978), Martine (1979), and Moura (1982). For treatments of Brazilian and Northeast poverty, see Fox and Morley (1990), Denslow and Tyler (1984), Hoffman (1986), Hoffman and Kayegama (1984), and Thomas (1987).

7. POLONORDESTE is Programa de Desenvolvimento de Áreas Integradas do Nordeste (Program of Integrated Development for the Northeast), and PAPP is Programa de Apoio para o Pequeno Productor (Program of Assistance to the Small Farmer).

8. Apoio para Pequenas Comunidades Rurais (Support to Small Rural Communities).

9. Tables 1.7 and A.4. For an explanation of the special case of drinking water in the second-generation projects, see note 6 in Chapter 2. For drinking-water expenditures in the first-generation projects, see note 39 in Chapter 2.

10. For a view on macro policy distortions, see Krueger et al (1988 and forthcoming), and the Brazil country study by Angus Maddison; for a political-economic explanation of these policies across less-developed *and* developed countries, see Lindert (1990); for discussions of the performance of Brazilian agriculture, see Dias (1988), Graham et al (1987), Homem de Melo (1983, 1987), Rezende (1987, 1988, 1989), and WB (5/18/89). For credit issues in Brazil, see Anderson (1990) and references cited therein.

11. For discussions of Northeast agriculture, see Homem de Melo and Canton (1980), Johnson (1971), Katzman (1984), Kutcher and Scandizzo (1981), May (1986), and World Bank (5/18/89).

2. *Reinventing the Projects*

Projects or components that worked well often ended up being substantially different from their original design, and in consistent ways. Many of the instances of good agency performance, moreover, originated *outside* the agencies meant to carry them out, and in agencies not specialized in that particular activity. The themes that ran through these episodes of better performance—regardless of the component—are the subject of this chapter. Briefly:

- The activity was often carried out within a time period *shorter* than the five to eight years planned for at appraisal. Longer-term, ongoing tasks were often transformed, in effect, into shorter blitz-like programs.
- As carried out, the project activity frequently amounted to a much *simpler* version of what was envisioned at appraisal, or worked better only after a process of re-definition and paring down.
- *One or two project components* were elevated to center stage. A governor chose a "signature activity" from the project's myriad activities, and supported it lavishly; or project managers themselves were drawn to a particular activity, which they saw as the "locomotive" driving the rest of the project.
- Good performance could often be attributed just as much to the relative *ease of the task* assigned an agency as to that agency's inherent capabilities. Similarly, bad performance often reflected the difficulty of the task.[1] The process of redefining the project's central task, and narrowing down its reach, also made project implementation easier than it was as originally conceived.
- Project management was unusually subject to clearly identifiable *outside pressures* to get things done, reach significant numbers of people, reduce costs, or be accountable in other ways. These "demand-side" pressures came from governors, beneficiaries, other state agencies, municipal governments, nongovernment organizations, and the World Bank.
- Dynamic public managers often *took tasks away* from the agencies to which they were assigned by the project, for reasons explained below. That the "taking-over" agencies could do well at an activity with which they had no track record requires some explanation; it also raises questions about the standard approach to project design, whereby project components are assigned to the established agencies with expertise and a history in a certain sector—roads to the road agency, irrigation to the irrigation agency, and water to the water agency.

This chapter starts with the takeover phenomenon, because it was partly through the attempt to understand why takeover was happening that the other five themes emerged.

Taking Over

Dynamic and successful agency managers almost always took over tasks from other agencies meant to carry them out. The project unit in Bahia took over the rural-road component from the road-building agency; Piauí's project unit took over rural water supply from the water agency and, in an earlier period, kept control over the land-acquisition component long after a state land agency was set up to carry it out; Paraíba took over rural road construction from that state's road agency; in several states, project units spearheaded initiatives to provide credit to small farmers in a way that circumvented the central role assigned to the official banking system for this task—namely, the Central Bank, the Bank of Brazil, and the Bank of the Northeast.

Though the units set up to coordinate the Northeast projects were responsible for many of the takeovers, dynamic managers in already-existing agencies with executing responsibilities also took over responsibilities belonging to other agencies. In the Ibiapaba project of Ceará, the extension service took over the siting of rural

roads from the road agency; Ceará's federal land agency took away land-settlement activities belonging to the state land agency, as well as agricultural-extension tasks belonging to the extension service; Bahia's federal land agency took over land-demarcation and parceling activities from the state land agency; Sergipe's rural water agency took from the state power utility the responsibility for supplying small irrigators with the transformers, the cost estimates, and the design work for connecting them up to the power network.

When the project-coordinating units took activities away from the agencies meant to carry them out, they did not necessarily carry the tasks out themselves. Piauí's project unit contracted out the drilling of wells for drinking water to private firms, a task meant to be carried out by the state water agency. Bahia's project unit contracted out road improvements to small local contractors instead of to the state road agency. Bahia's federal land agency contracted private firms to carry out land surveying and demarcation tasks, a task traditionally done by the state land agency and the federal land agency *itself*. Sergipe, mainly at the governor's initiative, created a new agency to carry out the rural-water component, instead of working through the existing state water utility. All these arrangements were not foreseen at appraisal.

Takeover agencies that contracted out the taken-over tasks to other agents did not always use private firms. Sometimes they used nongovernment organizations—Bahia's project unit contracted out agricultural extension and irrigation to the cooperative in the Irecê region, after taking those activities away from the state agricultural extension and water agencies. Sometimes they contracted other agencies in the public sector itself—Paraíba took road construction away from the state road agency and contracted the Army instead; Bahia's project unit turned partly to municipal governments, instead of the state road agency, for contracting out road improvements to local contractors; Ceará's project unit relied on the extension service rather than the road agency to plan the siting of rural roads; and several project units turned to the state development banks, rather than the Bank of Brazil and the Bank of the Northeast, to carry out small-farmer credit components.

The kind of rule-breaking and aggressive managerial moves that takeover involved are typical of dynamic and successful agency managers around the world. That the projects could attract such good managers and give them the rein necessary to make things work well, then, should be considered a sign of success and not a problem. But the takeovers also reflected the immense time and energy these managers had to invest in going *against* the grain of project design—lobbying the Bank and the Northeast regional development authority to accept their suggested changes, as well as fighting local bureaucratic battles to shoulder aside executing agencies that felt they had a place in the project guaranteed them by the loan agreement. In some instances, Bank staff were flexible about takeovers, recognizing their importance as "catalysts." But even in these positive cases, they worried that takeover contributed to bureaucratic redundancy, and therefore were loathe to condone the practice. This kind of redundancy, however, has often been pointed to as a source of innovation and good performance.[2]

Takeover did not always work well. Without expertise and experience in the taken-over activities, takeover agencies sometimes carried them out poorly. When this seemed likely to be the case, Bank staff opposed the takeovers. Sometimes, the takeover managers themselves did not always like the results of what they did, though they thought the takeover arrangements better than leaving things where the project had assigned them. Takeover, needless to say, usually created resentment and opposition to the project in the agencies from which tasks were taken away.

Most significantly, takeover seemed to undermine one of the major goals of the Northeast projects, and of rural development projects in general—namely, to build strong institutions in the public sector. In the 1970s, the Bank often created new agencies to implement its rural development programs, as a way of getting around the problems of low salaries, inefficiency, and rent-seeking behavior in existing public agencies. Though this approach had previously worked satisfactorily in the infrastructure sector—for reasons discussed below—it did not transfer well to rural development. The new project agencies came to be resented by the rest of the public sector, whose cooperation the new agencies needed, for their better salaries and working conditions. When the project ended, some of these new rural agencies simply died—in contrast to the infrastructure case, in which an initial project tended to be a *successful* first step in building a capable agency; or just the opposite occurred, with the new agencies becoming too powerful for their own good—too centralized, too extravagant, too unwilling to relinquish responsibility to others who could do things better, including beneficiaries. New agencies created for land settlement projects came under particular criticism for the latter reason, including the only land-settlement project funded by the Bank in Northeast Brazil, Alto Turí (World Bank 1985).

For all these reasons, the Bank and the Brazilians agreed not to create new agencies to carry out the Northeast projects. Instead, they would work through and strengthen existing public-sector institutions, no matter how inadequate they were. The only new entity would be a "modest" project-coordinating unto in each state,[3] usually located in the agricultural planning or planning agency of the state government. The new unit had no power to carry out activities like road-building or agricultural extension, but would

simply plan, coordinate, and monitor the carrying out of these activities by the existing agencies; though it was the lead agency in the project, it had no power to tell the executing agencies how to do things, or to withhold funding from them for poor performance.

If takeover behavior had been consistently associated with poor performance, it would be looked at as simply one of the many problems that affected rural development projects, or as the result of poor supervision by the Bank. But the fact that takeover was the standard operating procedure of the best project managers suggests that the design of the rural development projects was flawed and that the strengthening of established agencies was not happening according to plan. Moreover, the very success of the projects in attracting dedicated and dynamic managers laid the groundwork for takeover: these kinds of managers weren't interested in playing "modest" facilitator roles. Understanding why the good managers were always out to take over from the established agencies provides some clues about how to improve project design.

Why and How

Good managers took over from other agencies for various reasons.

- Most important, they and their staffs *preferred* carrying things out to "merely" coordinating them; project execution conferred more power and prestige than coordination, was more satisfying, and had a transforming effect on agency morale.
- Takeover managers thought the established agency was *performing poorly*—proceeding too slowly, doing shoddy work or not being committed to the project's goals, particularly those of assisting small farmers and the poor.
- Takeover gave agency managers more *control* over the pace, quality, and cost of project execution, all of which they felt keenly responsible for; when established executing agencies themselves took over tasks from others, they saw this as necessary to making their own components work properly—as in the case of the rural water agency that took from the state power utility the responsibility for providing transformers to small irrigating farmers.
- The established agencies frequently found it difficult to meet the large *surge in demand* for their services caused by the project, even if they had been performing adequately until that moment.
- The projects, or one of their components, often attracted the strong support of a *powerful state governor*, whose pressure for "results"—often beyond those originally planned for at appraisal—could not be met by the established agencies if they continued with "business as usual."
- The taken-over task was *quite different* from what the established agency was used to doing, even though it seemed to be the same thing—small irrigation instead of large irrigation, spot road improvements instead of rural road construction, irrigation instead of rural water supply, extension services for small farmers instead of large farmers, rural water supply *with* maintenance and operation instead of just installation of the system. Also, the taken-from agency perceived this different task as being more technically or administratively difficult, or less professionally "appropriate" than what it was doing—even though a changed approach was central to achieving project objectives of reaching the poor, reducing costs, and decentralizing the planning and implementation process.

How could agencies with no experience at a certain task have simply taken over from the established agencies and done a reasonable job—especially in an environment of weak public-sector institutions? What does this say about the "new wisdom" of not creating new agencies, and of instead building capacity over the long term in particular agencies specialized in particular tasks? The takeover agencies were able to carry out tasks to which they were unaccustomed because:

- They drew on the expertise of all the agencies in the state's public sector, always bringing a good specialist or two from outside, often from the taken-over agency itself.
- They sometimes contracted out the work to private firms, nongovernment organizations, or other agencies; even though they still weren't doing the work themselves, this gave them the power to supervise closely, hesitate over contract renewal, or threaten to withhold payment—a power they did not have when they were "just" coordinating the activity through another agency.
- They tended to lavish their attention, energy, and scarce funding on one particular taken-over component, while the other components were allowed to waste away from the chronic afflictions of inadequate executing agencies, funding delays, and inflation; this gave the takeover agencies the opportunity to do a few components "right," and produced a final version of the project that was narrower than the original, with fewer agencies playing an active role.
- In some cases, the tendency to narrow the project down was reinforced by strong support from a governor, who usually pushed for one particular "signature" activity, like rural water supply, small-farmer credit, or irrigation.
- The ability to attract, retain, and protect a few high-quality professional staff seemed more central to these

successes than a long history with a particular activity; the best managers, whether involved in takeovers or not, were more concerned with quality issues regarding personnel than with staff numbers; they would work hard to get a few good professionals seconded to them from other agencies, fight for the establishment of merit criteria in hiring, and fiercely protect their prized professionals from political interference.

- The project tasks that were perceived by the established agencies as being different, more difficult, and less desirable than what they were used to doing were sometimes *easier* for the takeover agencies or more appropriate to their skills; as soon as rural water supply was defined to include organizing the community to operate and maintain its new well, for example, this took the activity onto a terrain more familiar to the project units—with their field agents trained to carry out the community-participation component.
- Many of the takeover successes were driven by an "inside" lobby of bureaucratic enthusiasts in the takeover agency; though such individuals could be found scattered throughout the public sector, including the taken-from agency, their influence had been diffuse and they usually did not have power in these other agencies; turning them into a critical mass in the takeover agency, and backing them with the strong support of a dynamic manager (and, sometimes, a governor), was crucial to the success.

The Taste for Execution

The preference for carrying things out explains, in part, the great enthusiasm for and attention lavished by project units on the community-participation component (APCR). Though enthusiasm for APCR ran high throughout the Northeast because of its participatory style, there is no question that its special role as the project unit's *only* executing responsibility in the majority of the states also attracted intense bureaucratic energy to it.[4] APCR was the only component for which project units had a chance to prove their mettle as executors without takeover, the only activity for which they were not dependent on the good will and competence of other agencies, and the only activity for which they could build a constituency genuinely beholden to them. It is understandable, then, that APCR always survived the narrowing down of the Northeast projects to their most "do-able" parts.

The taste for execution also helps explain the unusual performance of the water component in meeting its projected goals on time and, in many cases, exceeding them—though performance in maintenance subsequently proved inadequate, as discussed below. APCR, that is, provided a foot in the door to project managers for their takeover of rural water supply and other activities[5] that required a presence in rural communities. Because of the poor record on operation and maintenance of rural water systems, the Bank has recently taken the position that communities be made responsible for the operation, financing, and maintenance of their new wells—and that these arrangements should be in place *before* the well is drilled. Water agencies and engineers were not used to, or particularly interested in, doing this kind of organizational work (see below); the APCR staffs, in contrast, were quite involved in community organizing for the APCR projects, and therefore greeted the task of organizing for water with enthusiasm, seeing it as a mere extension of what they were already doing. Once the APCR staffs took over the community-organizing activity for water, it was a natural next step for the project unit to take over decisionmaking and supervision around the installation of the wells themselves. APCR staff wanted this too, because it enabled them to make sure that once the community was organized, the water would arrive in the form, at the time, and in the place it was supposed to. When that didn't happen, their credibility in the community's eyes was diminished.

Difficult and Easy

As with rural water, other cases of good performance originated outside the agencies specialized in that activity. The largest land-purchase scheme of the Northeast projects was carried out mainly by a newly created project unit in the state planning agency of Piauí, rather than by a land agency; the most promising experiments in small irrigation for landless farmers in Bahia were carried out by a combination of the project unit and the local cooperative—both neophytes in irrigation—rather than the rural water supply agency, which was one of the most experienced in the Northeast; some of the best results achieved in getting credit to tenant farmers worked through ad hoc commissions of state institutions, rather than directly through the banking systems designated at appraisal; in Pernambuco and Sergipe, field testing and adaptation of important mechanical innovations coming out of agricultural research were carried out by non-specialized, applied agencies rather than the research agency itself—the cistern for household water, and implements for animal traction, as discussed in Chapter 5.

In all these cases, as with rural water, the task was more difficult for the established agency than for the takeover agency. Doing it right required a change in an agency's previous way of doing business, which its professionals usually didn't like, and a certain loss of autonomy. The task redefinitions therefore became part of the cause for poor performance by the established agencies, as well as a reason for many of the cases of takeover. At the same time,

redefining the task put it more within the reach and the tastes of the non-specialized takeover agency. And getting specialist help was not difficult, given the ease with which state agencies could borrow professionals from other agencies—especially when they had the support to do this from powerful governors and agency managers.

Whether or not tasks were redefined, they varied greatly in their relative ease or difficulty. Rural water is a good example because of the importance of explaining its popularity and performance in the Northeast projects, its takeover by project-coordinating units, and its partial displacement of other components like agricultural extension, credit, and irrigation. Accounting for less than 2 percent of appraised costs of the second-generation projects, water had already reached 10 percent of expected costs two to three years into project implementation.[6]

The simplified stand-alone rural systems and standpipes of the Northeast projects were "easy" because they received crucial political support. This approach to water allowed governors to "deliver" to large numbers of dispersed rural populations within short periods of time. More centralized approaches to water, including individual household connections, took longer to plan, finance, and execute than the four-year term of office within which governors wanted to show "results" —as discussed below It was precisely on these grounds that Sergipe's governor rejected a 150-kilometer pipeline proposed by his water engineers to meet the state's rural water problem, and opted instead for the more decentralized, stand-alone wells that could be put in place more rapidly.

Water agencies also viewed water (rural or urban) as easy in comparison to *irrigation*, as discovered by the state water agencies that moved from water to irrigation.[7] They saw irrigation as more "analysis-intensive," requiring more time, more skill in supervising contractors, and therefore more delay until installation could begin. Irrigation also involved more dependence on outside actors and other expertise than did drinking water—a knowledge of agricultural practices in the region, land-tenure constraints, and existing water-using customs. The water agencies switching from drinking-water supply to irrigation complained of this loss of autonomy and increased complexity. They were disappointed that their performance in irrigation was not up to the reputation they had built in water. In addition, the planning of irrigation projects often unleashed project-delaying conflicts over the use of land and water, which drinking-water projects rarely did.

Spot checks of water systems installed under the first-generation projects sometimes found only half of them to be working, a finding that is not infrequent in such programs. This suggests that the good performance in completing the rural water component cannot be viewed as an unsullied success, and that rural water is "easy" *only* if operation and maintenance are not taken into account. Even as a construction task, however, rural water's *exceeding* of its targets only a few years into implementation of the second-generation projects is still impressive—given that (1) expenditures for the whole program were only half of what was expected by that time, (2) there was a marked lag in progress in other *construction* components like irrigation (or roads under the first-generation projects, where expenditures were only 67 percent of appraised levels). In addition, organizing communities for finance, operation, and maintenance *before* their water is supplied—as the Bank is now insisting—may actually make rural water supply *and* maintenance more difficult. In a small survey of systems that *were* functioning well, that is, community organization around water operation was *not* the explanation (Beteta 1990c). More commonly, a private individual using the water for productive purposes had organized and financed the operation of the system, and also distributed the water equitably—suggesting that the emphasis on community responsibility for maintenance and financing of rural water may be misplaced.[8]

Insisting that communities be organized around rural water supply *before* wells are drilled also turns an easy task into a difficult and long drawn-out one. It deprives rural water of the support from elected leaders who choose programs according to how fast they can be completed, and also of the enthusiasm of technocrats committed to "delivering" something to the poor as soon as possible. This does not mean that the maintenance problem can be ignored. Rather, (1) some simple evaluation work needs to be done on the institutional design associated with the better-operating systems, given that the partial findings of this review do not point to the kind of community approach followed by the Bank; and (2) it may not be such a bad idea, in the interim, to work on the maintenance problem *after* the wells are installed, in order to preserve the "easiness" of construction. This is actually what the Bank has been doing with some success recently, refusing to disburse on new water systems until the old ones are put into working order. In not taking this stance more routinely, the Bank may be at least as responsible for "the maintenance problem" as are the communities that failed to organize. Whatever the ultimate choice, it is important to understand that organizing communities to maintain and finance the operation of water systems has considerable costs in terms of depriving rural water of its unusual "easiness." Beteta's findings, luckily, raise some doubts about whether community organizing around water is indeed a prerequisite for success at operation, and suggest that there may be less cumbersome ways of getting community water systems to function well.

The relative easiness of a task also depended on the nature of the executing agency, and what it was used to doing. The simplified rural water programs of the Northeast

projects would seem easier than urban water supply because they were less technically sophisticated and involved stand-alone systems, usually without individual household connections. But *urban* water agencies saw rural water as more difficult than urban: they couldn't charge as easily for water in rural systems, they were barred from the capital-intensive, central-system solutions that they liked and were accustomed to, they had little opportunity to use their sophisticated engineering skills, and the operation and maintenance of the system depended on the unpredictable behavior of users more than in urban water—at least for the way the Bank was insisting that operation and maintenance of rural water be done.

A similar distinction can be made with respect to public and private *irrigation*, or large and small. State-government agencies frequently viewed *private irrigation* projects as easier than public ones, or smaller as easier than larger. The eminent-domain proceedings and displacement of inhabitants required for public irrigation projects, coupled with the long time period over which these investments were carried out, caused conflict, resistance, and apprehension. As a result, governors and other state officials increasingly came to see public irrigation projects as politically costly. In the eyes of the established irrigation agencies, however, *private* irrigation was more difficult. Instead of being able to design self-contained and dramatic projects, starting with the *tabula rasa* of newly expropriated land along an irrigation perimeter, private irrigation projects had to work with existing patterns of landholding and water use, in a more piecemeal fashion, and with less conspicuous physical results.

For similar reasons, many considered *land purchase* easier than land expropriation. Purchase did not unleash the costly conflict and delay that expropriation did, and purchase gave more control than expropriation to the lead agency—just as drinking-water supply was more within the control of a water agency than irrigation. Purchase depended less than expropriation on the concurrence, hard work, and ethical behavior of other institutions—the court system, the legislature, other land agencies. In addition, purchase was something "any" agency could do—not just, as in the case of expropriation, an agency with formal authority over land matters. Though project-coordinating units and other non-land agencies did not have the formal authority to expropriate, let alone to execute other components, they could obtain the authority to purchase.

Spot improvements on rural roads and the use of small local contractors, though technically less sophisticated than road-building or re-construction, could be managerially more complex because they required the letting out and monitoring of many small contracts.

The examples above show that the ease or difficulty of a task did not necessarily inhere in the technology of the task itself, but also related to (1) its organizational or managerial features; (2) what the agency had been doing previously and was specialized in; (3) whether the staff members of the relevant agency liked the task, determined in part by whether they considered it "professional"; and (4) the amount of pressure or support for that particular activity that came from outside the agency. For each agency that didn't like a particular task, moreover, there was often another one that *did*. Whereas irrigation agencies preferred large to small irrigation, as noted above, the less specialized state agricultural agencies or project units preferred *private* irrigation to public. Whereas state power utilities didn't like the complications of attending to the requests of numerous small irrigators for transformers, agricultural agencies did. Whereas road agencies didn't like carrying out analyses of traffic flows and concentrations of farm production in order to site farm-to-market roads, agricultural extension agencies did.

Among the infrastructure agencies, in sum, the most significant task redefinitions of the Northeast projects required that agencies change (1) from rural road construction to spot improvements; (2) from rural water supply to irrigation; (3) from urban water supply to rural water supply; (4) from individual household connections to community standpipes; (5) from large irrigation to small irrigation; and (6) from construction (in roads and water alike) to operation and maintenance.[9] These changes, in turn, created problems for the agencies involved. *First*, though the redefined tasks were often less sophisticated technically, they could be administratively more difficult to the extent that they required a more decentralized style of operation. *Second*, the redefined task required more cooperation from users and sometimes from other agencies, whereas the agency had been able to work in a more self-contained way previously. *Third*, to an agency's professionals, the redefined tasks often represented a professional "comedown" in terms of standards, prestige, and past work; the new tasks were less technically sophisticated, less equipment-intensive, and more dispersed. *Fourth*, the established agencies and their professionals simply didn't like the tasks as redefined by the project, or as insisted on by the Bank during the course of execution, partly because they were not particularly interested in the distributional objectives of the program.

Many of the examples of task redefinition and its problems come from the sector of rural infrastructure and are particularly relevant because of the new emphasis on rural infrastructure in the research on agricultural development and in the Bank's thinking about poverty-reducing rural development strategies. Namely, established infrastructure agencies will often find it difficult, or not to their taste, to come up with the "right" version of rural infrastructure in the 1990s—that is, as a leading investment in a poverty-reducing, decentralized rural growth strategy.[10]

Getting Around Old Agencies

The takeover agencies succeeded in carrying out tasks with which they had little experience, as noted above, partly by finding competent and sympathetic professionals in the established agencies, and borrowing them. Putting the sympathetic professionals in a more empowering bureaucratic environment—even if only temporarily—sometimes gave the redefined task a better chance to be learned and adopted ultimately by the established or taken-from agency itself. Once the new approach had been tested and proven, it became more interesting to the established agency—partly because the "invasion" of its turf by an outsider agency aroused its competitive instincts. In the best of circumstances, the taken-from agencies eventually showed interest in getting back the task they had lost and doing it themselves. When the Irecê regional office of the Bahian water-supply agency (CERB) lost the small-irrigation component to the local cooperative, its main engineer went too. After working with the coop to set up the program, he went back to CERB and lobbied hard to get the component back by showing that CERB *could* do small irrigation—and "better than" the cooperative.[11]

To be successful, takeover need not be permanent. Indeed, it may have the most lasting effect on the way public agencies do things if it is *not*—namely, if the borrowed professionals go back victorious, after the taken-over task is successfully implemented, to their original agencies. The temporary appearance of the new agencies on the scene may have been the catalyst for getting the task to be taken up, ultimately, by the established agency. If new agencies drop out of existence when a project terminates, in other words, this does not necessarily signify the failure that it is sometimes interpreted to be.

These findings also provide a different perspective on the much-commented problem of "instability" in the management of public agencies in third-world countries. Though agencies suffer from the frequent departure of good managers and staff, as chronicled in supervision reports, other agencies may at the same time gain. Though any particular agency may be "unstable," the pool of expertise available to work on a problem may be much less so. Creating such a pool in the public sector of the Northeast may be one of the most important contributions of the Northeast projects—not fully appreciated precisely because it is an "externality," not captured in the evaluation of any particular "unstable" agency.[12]

Under some circumstances, then, new agencies or units may not be such a bad idea—if the tasks are technically or administratively easier than most but, for some reasons, are difficult for the established agency. Shifting the scene of activity from one agency to another, though seemingly redundant, can also help a problem to get worked on properly—as the best of the takeover stories show. The experience and track record of an agency with a particular activity, that is, may be precisely what makes it *difficult* to that agency. Sometimes there may be good reason then, *not* to place a certain component in the hands of the established agency. At the least, the new task may do better if first developed outside the established agency.

These explanations as to why new agencies or units sometimes did well parallel the reasons for which new agencies did better in infrastructure than in rural development. For infrastructure projects, it did not matter whether other agencies were jealous and resentful, because the projects were not dependent on coordinated action with other parts of the public sector. The rural development projects, in contrast, seemed to *maximize* the dependence of agencies on each other. And to the extent that the rural development agencies were successful, it was partly by virtue of their transforming their work—through takeover—in a way that made them *less* dependent on other agencies—namely, more like the new infrastructure agencies, with their self-contained "starter" projects.

This guarded affirmation of the concept of creating new units, or assigning tasks to agencies where they don't belong, does not really fit the project-coordinating units as they were set up under the Northeast projects. The mandate of these new units was just the opposite of what is being recommended here: they were supposed to *coordinate* the activities of myriad other agencies. This burdened them with the maximum degree of dependence on other agencies, together with minimum control over the quality of what happened. And to the extent that they turned out successful as "new" agencies, it was when they did what they were *not* supposed to—narrowing down the projects to a few components, and wresting control of those components away from the agencies originally responsible for them.

Finally, explaining agency performance in terms of the relative difficulty of the task helps decipher the strange cyclic behavior of agencies. Those with years of good performance often experienced sudden and prolonged falls from grace; and those that received consistently poor grades on performance for years often showed sudden and dramatic improvements—an issue discussed later in Chapter 5. Though evaluators usually attribute these abrupt changes to the loss or arrival of a good manager or to "politics," the factors discussed above are equally important. The sudden fall from grace of Sergipe's rural water agency, for example, relates in part to its being made to switch from simplified rural water systems to irrigation. These kinds of explanations, at the least, are more systematic—and more within the control of project designers—than "leadership" and "politics" are.[13]

Taking Control and Narrowing Down

Inflation and chronic delays in the transfers of budgeted counterpart funds from the central government to the executing agencies made planning and implementation in the Northeast projects extremely difficult. A complex approvals structure for funding transfers and for authorizing changes in project design required the approval of the Northeast regional development authority (SUDENE), the Bank and, in some cases, the respective ministry at the federal level. [14] To obtain the transfers due them, agency managers had to invest considerable time in lobbying the appropriate authorities, including state and national legislators. Added to these problems was the environment of increasing fiscal austerity in Brazil, with repeated cuts in agency staffs, or threats of them, and the demoralizing effect of constant fear of these cuts on staff performance. Though Bank reports have identified and analyzed these problems extensively, and the Bank and the Brazilians have worked hard to reduce them, they still persist. Project managers coped with these problems in three ways: (1) they narrowed down the projects to one or two components, (2) they contracted other agencies and private firms for services, and (3) they escaped some of the inflexibility around their budgeting, and made up for budget shortfalls, by investing their agencies' cash balances in the money market.

The Brighter Side of Inflation

The acuteness of the problems cited above, and the way they consumed the attention of the Bank and the Brazilians, have somewhat obscured a more positive dynamic behind them. The havoc wrought on budgets by inflation and funding delays gave project managers some liberty to "reinvent" the projects more to their liking. Narrowing things down to a few favored components represents one of these reinventions. If funds were less than planned for, and if one agency didn't come through the way it was supposed to, this created a kind of chaos in which managers could stray from project norms unobserved—all in the name of "making do" with a smaller amount of funds than had been budgeted. Those who might object—the Bank, SUDENE, or the central-government ministries—were themselves distracted with the task of dealing with the same problems of inflation and delays in the transfers of counterpart funding to the project agencies.

Also contributing to this chaos-driven "flexibility" was the central government's response to high inflation, in the form of an indexed and highly liquid financial instrument, the "overnight" market. Created in the 1970s, these money-market-type accounts allowed individuals, firms, and public agencies to keep their operating funds in accounts that kept up with inflation and yielded at least a small real return.[15] Even when the return to project agencies from keeping their cash balances in the overnight did no more than preserve their value against inflation, the return was nevertheless "off the budget"; it was not subject to the same regulations and scrutiny by SUDENE, the central government, or the World Bank, so that project managers did not have to obtain permission from these entities to finance activities or use procedures not sanctioned in the project agreement or annual operating plan. Project managers liked the overnight earnings, in sum, because they could be tapped whenever needed, and provided more flexibility and control over their budget than was the case with the transfers of Bank funds and central-government counterpart. [16]

In certain ways, then, the larger economic and institutional problems in which the Northeast projects were embedded opened up opportunities for dynamic project managers to do things more as they saw fit, and to break out of the constraints of project design—amounting to a kind of *de facto* fiscal decentralization that could not be achieved formally. This is not to say that inflation, shortfalls, and delays and the increased costs they cause are good things.[17] The lesson of this "brighter side" of chaos, rather, is that good managers wanted and performed better with extra flexibility. The returns to be had from the "overnight" represented one way to gain this flexibility.

Contracting Out

The takeover managers contracted out tasks because of the different kind of relationship with the executing agent that was thereby made possible. This was the case whether these managers contracted a private firm *or* a public agency (or a non-profit private organization). Though the takeover managers sometimes viewed the private firms they contracted as more costly and less desirable than the appropriate public agency, they nevertheless preferred the firm because of the different kind of bargain they could strike with it—proposing that it carry out a specific task, at a specific price, and within a specified time period.[18] This greater specificity was possible, in turn, partly because the contracting out happened only after the project had started, and project managers knew more than they did at appraisal. Problems had been identified, the more difficult tasks had separated themselves out from the easier, the weaknesses or unwillingnesses of certain agencies had become apparent. In contracting out certain tasks, then, project managers were also sloughing off other ones that now seemed to promise only headaches and little progress.

In contrast to these contracted arrangements, the project agreements guaranteed a place in the project for the executing agencies regardless of their performance. The project unit did not have the kind of sovereign control that it had

when it directly contracted an agent to carry out a particular task. Under the contracted arrangements, moreover, the "bilateral" negotiation between the two parties to the contract made for a more "accountable" environment of implementation. This contrasted with the numerous agents participating in a typical project agreement—the World Bank, the Northeast regional development agency, the executing agencies, the central-government ministries, and the project-coordinating unit.

Project units and other agencies contracted out, in sum, because it gave them more control than the project did over the quality, pace, and cost of execution of the project, and more power to hold executing agents accountable—whether that agent was private, public, or nonprofit. The lesson to be drawn from this experience is that inter-agency obligations in a project should follow the narrower and more highly-specified form they took in the takeover cases. This contrasts to the more loosely defined and equal relationships characteristic of the Northeast project agreements, where no single agency had the responsibility *and* the power to deliver.

The second generation of Northeast projects made a valiant attempt to narrow down the number of components. Health, education, roads, electrification, and drinking water [19] were excluded, leaving "only" those components directly related to agricultural production—credit, extension, research, irrigation, land tenure, seed production and dissemination, input distribution, and APCR. Though an important step in the right direction, this improvement still left too many bureaucratic actors on the scene—the agricultural extension service, the agricultural research centers, the land agencies, the banks, and the project-coordinating units—to name only the most important.

Having a single agency in charge would not preclude that agency from being responsible for more than one activity—as the stories of successful takeover illustrate—so long as the agency has the power to do things itself, contract them out, or force other agencies to collaborate. But this would require that the Bank pay more attention to implementation in relation to appraisal.[20] During the first months of implementation, the early experience would be assessed and hard decisions would have to be taken about the institutional direction the project would take. The appraisal process itself would involve less the mapping of a standard rural development project onto a particular state than it would a search for a single agency that had the power, the interest, and the commitment to mobilize what it needed from the public and private sectors. The result of such an appraisal process would be closer to the stripped-down versions of the current Northeast projects, which have surfaced two or three years into their implementation. But the process of getting there would be more efficient: it would go with the inclinations of the dynamic managers, rather than against them.

If this approach had been used to design the Northeast projects, they would not have looked so similar to each other in their appraised form. After having gone through a process of selection and winnowing from a "menu" of financeable activities suggested by the Bank, each project would have represented a unique fit to the institutional, political, and agronomic environment of its state. The Bank would have accepted, moreover, that the fit might no longer be good a few years later, and the project might have to be changed to reflect changed circumstances and new learning—as happened when the Bank allowed rural water supply to take on a larger role in the second-generation projects a few years into implementation. The Bank now believes that allowing water into the PAPP projects was a good thing to do, partly because it was able to have a constructive influence on improving the way rural water supply was carried out: the strong political pressure for water, together with the technocratic enthusiasm of project staffs for it, forced project managers to face the problems of faulty maintenance and inadequate financing for operations—as the Bank insisted—rather than to retreat in disinterest to the safety of an easier component. The lesson of the water story, then, is not just that it was a good fit, but also that this could not necessarily have been determined at appraisal. By being demanding during implementation about operation and maintenance and its financing, the Bank was shifting its energies from the appraisal to the implementation period, in effect, and having a significant impact in the sector.

The Problem with Agricultural Extension and Credit

Though takeover initiatives ran the gamut of project components, it was easier for project units to take over in water, irrigation, roads, and activities associated with land distribution—as distinct from agricultural extension, research, and credit. The more "takable" activities could be contracted out to private or other agents, while this was more difficult with credit, extension, and research.

The "takable" activities were also investment-intensive, in contrast to the staff-intensive nature of activities like extension, research, and credit. Investment activities could be more easily stopped and started at will, in accordance with the delays and shortfalls in funds received from the federal government, a chronic problem of the Northeast projects and of development projects in general; to cope with this problem, project managers simply delayed the letting of contracts, or put payments to contractors on hold. Staff-intensive services like agricultural extension could not adjust so easily to these ups and downs; they had to pay their staffs regularly, and could not lay staff off or on in accordance with the ebb and flow of funds. Political pressure,

moreover, dictated that salaries and preservation of staff always get priority—not only over investment, but over payment of non-salary operating costs like fuel for vehicles and travel allowances. This meant that the expenditures complementary to good staff performance got sacrificed when funding was delayed or fell short. In Ceará, for example, the Secretary of Agriculture reported that 85 percent of extension's costs were going for salaries, leaving only 15 percent available for non-salary operating costs.[21]

Investment programs were able to fall back on another source of funding if funds arrived late—namely, the private contractors themselves. By accepting late payment, private contractors absorbed the costs of public-sector funding delays themselves and, in effect, "advanced" to the public sector the funds for their payment; or, they simply stopped their work in mid-stream, to resume when funds started flowing again. The labor-intensive public activities like extension, in contrast, had no such mechanism for insulating project activity from the ups and downs of funding delays.

For all these reasons, project managers had less room to maneuver and to seek solutions more to their liking in the labor-intensive activities. When the performance of the extension service left something to be desired, they could not simply leave extension in the lurch, turn to another agent, or spend the money on another component—given that the projects typically financed a third of the salary costs of the extension service. But they *could* do so with water, irrigation, and roads—not only for the reasons cited above, but because capacity also existed in the private sector, and because the infrastructure agencies were not dependent on project funding to pay a significant percentage of staff salaries.

The Bank justified the funding of extension salaries in the Northeast projects and elsewhere on the reasonable grounds that this was the only way to gain leverage over extension activities.[22] The result, however, was in some ways just the *opposite*: the larger the percentage of an agency's salaries that were funded by a project, the *less* leverage the Bank or project unit had. This was because of the politically disastrous consequences of withholding an agency' s funding for poor performance, or transferring those funds to another agent. Similarly, and ironically, project units ended up protecting the agency they were most dissatisfied with—agricultural extension—and sacrificing the infrastructure components, which they often liked more. All this helps explain why expenditures for the popular road component were only 67 percent of those expected, while those for extension were 110 percent of expected (Table 2.1). Indeed, extension was the only major component of the first-generation projects for which actual expenditures were *greater* than appraised—and despite the fact that total expenditures were significantly *less* than expected for all the projects, only 59 percent.[23] In addition, the number of new extension staff hired under the projects was 21 percent higher than that expected at appraisal, increasing in all but one of the six projects for which such data were available (Table 1.8). Finally, extension's share of total appraised costs was increased from 14 percent in the first-generation projects to 24 percent in the second (Table 1.7).

Though credit was also a staff-intensive service, its share of costs *fell* from 27 percent appraised to 18 percent actual, and it had the *lowest* level of disbursement among all the components—50 percent of appraised. Credit's staff intensity did not lead to higher disbursements, in contrast to extension, because the payroll of the participating banks, as well as their capital, was in no way dependent on project financing the way agricultural extension was. Credit's problems remained unresolved, however, because it was more difficult to take over than other components. The institutions handling credit under the Bank projects were more centralized than those carrying out the other components—mainly, the Central Bank, the Bank of Brazil, and the Bank of the Northeast—and operated according to standardized regulations. In contrast to the state agencies carrying out other components, these institutions were not subject to the will of state government. They could not be ordered around, and the activity could not be contracted out to others—though valiant attempts were made to do so throughout the program.

Analyzing project activities in terms of their "takable" qualities throws a different light on "the extension problem" (and the credit problem). The difficulty project managers experienced in gaining control over extension and credit, that is, partly explains the frequently poor performance of these components. Similarly, the greater ability of project managers to take over infrastructure, and the greater adaptability of these activities to stops and starts in project funding, help explain why project managers often threw up their hands in frustration over extension and credit, and narrowed down their attention to more takable components like water or land. The critics of agricultural extension, however, question the value of the activity in itself, and the quality of the service: they ask whether extension has anything to bring to a farmer that well-functioning markets cannot, and whether young extensionists with minimal agricultural training can teach anything to an experienced peasant farmer.[24] Though these doubts are important ones, this analysis focuses instead on some difficulties inherent in trying to elicit good performance from extension services, and their greater vulnerability to the fiscal environment.

Understanding takeover, in sum, helps explain the root of "the extension problem," as well as others. The conclusion to be drawn from the preference project managers sometimes reveal for infrastructure (and other components) over extension and credit is not necessarily that one activity has higher priority, or yields greater impacts, than

Table 2.1: Northeast Brazil Rural Development Projects: Appraised and Actual Expenditures by Component for Eight POLONORDESTE Projects
(US$ current millions)

Project Component[a]	Appraised		Actual		
	Total Value	Component as Percentage of Project	Total Value	Component as Percentage of Project	Actual as Percentage of Appraised Component
Rural Credit	144.87	26.8	71.90	18.0	49.6
Feeder & Access Roads[b]	111.48	20.6	75.10	18.8	67.4
Rural Extension[c]	73.60	13.6	80.94	20.2	110.0
Land Related Activities[d]	57.59	10.7	28.04	7.0	48.7
Project Administration[e]	32.78	6.1	50.48	12.6	154.0
Water Resources/Supply[f]	29.19	5.4	21.68	5.4	74.3
Education and Training	29.14	5.4	23.02	5.7	79.0
Health and Other[g]	20.60	3.8	11.73	2.9	57.0
Other Ag. Services[h]	18.90	3.5	12.48	3.1	66.0
Marketing Activities[i]	13.20	2.4	15.82	4.0	119.8
Agricultural Research	9.07	1.7	9.21	2.3	101.5
Total Baseline Costs[j]	540.4	100.0	400.4	100.0	74.1

Sources: For appraised data, same as Table 1.1. For actual data, Project Completion Reports, Projects Dept., Latin America and Caribbean Regional Office, World Bank: WB (6/30/86; 6/2/87; 6/24/88; 6/26/89; 11/21/89).

a. Includes Rio Grande do Norte, Ceará/Ibiapaba, Paraíba/Brejo, Bahia/Paraguaçu, Sergipe/Tabuleiros Sul, Pernambuco/Agreste Setentrional, Piauí, and Ceará II. As of August, 1990, Project Completion Reports and actual expenditure data were not yet available for Maranhão and Bahia II. Because the component categories and sub-categories vary somewhat in the POLONORDESTE projects, some categories have been recombined to facilitate comparison across projects. Components are listed in descending order of importance of appraised value.

b. Includes rural electrification in the Ceará project only, amounting to 53 percent of appraised costs and 58 percent of actual costs of road category in Ceará.

c. Includes agricultural extension, social extension, and farmer training.

d. Includes land titling (Rio Grande do Norte, Paraíba, Bahia, Sergipe, Ceará II) and land purchase (Sergipe, Piauí).

e. Includes project monitoring, evaluation, administration, and preparation.

f. Includes water resources/supply and conservation (Pernambuco, Piauí); irrigation (Bahia, Piauí, Ceará II); multipurpose dams (Bahia); and inland fisheries (Rio Grande do Norte, Piauí).

g. Includes health and sanitation in Bahia, Rio Grande do Norte, Ceará, Paraíba, Sergipe, Pernambuco, and Ceará II.

h. Includes field experimentation (Ceará, Ceará II), mechanization services (Ceará, Bahia), seed production (Rio Grande, Pernambuco), farm development (Paraíba), non-farm enterprises (Pernambuco), and small scale enterprises (Paraíba, Ceará II).

i. Includes storage (Bahia), cooperative support (Ceará, Bahia, Pernambuco, Ceará II), marketing and cooperative support (Rio Grande, Sergipe), marketing (Sergipe, Pernambuco, Piauí, Ceará II), and support for small communities (Piauí).

j. Total Baseline Costs exclude: miscellaneous unallocated funds, physical contingencies, and price contingencies. See Table 1.7 for these costs.

the other. Rather, managers preferred certain activities because they offered the opportunity for greater control. This perspective helps to reconcile two seemingly contradictory impressions on extension that often emerge from reviews like this—a generalized exasperation with the extension service alongside glowing reports of particular extension successes in certain regions at certain times. The question, then, is how to increase the incidence of these successes and subject extension to more performance-inducing pressures. The successes are examined, and the question taken up, in Chapter 5.

Coordination

During the implementation of the first-generation Northeast projects, supervision reports routinely complained of how the "lack of coordination" between agencies impeded project execution—a common problem in multi-agency projects throughout the world. In designing the second generation of projects, as a result, the Bank tried to place responsibility for particular components more squarely within particular agencies.[25] Coordination between at least two agencies, nevertheless, continued to be crucial to the carrying out of some components—even though this involved fewer agencies than in the previous set of projects; and the project unit continued to have the same "coordinating" role it had in the previous generation of projects, together with the same lack of power to enforce or withhold funding if performance were not satisfactory. Coordination problems continued to plague the Northeast projects, therefore, though reducing the number of agencies involved definitely helped.

Despite the repeated failures of coordination, the Northeast experience shows some striking instances of success at

coordination—often involving the very agencies that had routinely received poor grades on coordination during the life of the projects. Some of these instances of coordination occurred around the carrying out of the most favored single activities referred to above. Narrowing down the projects to a favored component or two, however, did not always mean the exclusion of the others. Sometimes, one component became the center around which the others were organized—the "locomotive" (*carro chefe*), as several project managers said, that "pulled" the others. In *Bahia*, after 1985, the project unit mobilized credit, extension, road-building, and input-supply around the "locomotive" of that moment—the agrarian-reform settlements—even though this was not foreseen at appraisal. In *Pernambuco*, the project unit organized agricultural extension, research, and credit around a special program focused on identifying and breaking bottlenecks in certain crops in certain micro-regions—also not foreseen in the appraised project (see below). In the semiarid *Irecê* region of Bahia, where agrarian reform was minimal, the project unit introduced collective irrigation by tubewell for the first time in the region; this became the centerpiece around which agricultural extension, credit, potable water, and APCR projects were organized. The Project Completion Report for the first *Piauí* project, in fact, pointed to that project's land-transfer component as just such an "organizing theme" —concluding that coordination was more likely to occur when multicomponent projects were organized around such "leading" themes (World Bank 6/26/89, paras. 8, 7.04). Organizing the appraised project around a single theme actually set Piauí apart from all the other projects, including Piauí's second-generation project itself.

When coordination between agencies *did* take place, the coordination was often informal, ad hoc, and episodic—not the result of a sustained pattern of coordinated work, as envisioned in project design. These episodes frequently involved narrower, shorter-term, more concrete and results-oriented objectives. In Pernambuco, for example, the project unit organized small teams to carry out "lightning" canvasses of a municipio or two within two weeks; the team identified bottlenecks in the production or marketing of small-farmer crops that might be broken within a one-year crop season, with short-term credit often playing a role.

The PROMOVALE project in Ceará—an "alternative" to the Bank-funded projects in the eyes of the Ceará governor of the early 1980s—also represented a major narrowing down of the concept of an integrated rural development project, yet without necessarily focusing activity in one agency.[26] Though the governor focused the project on small-scale private irrigation, this did not imply narrowing it down to an irrigation *agency*. Because of the decentralized and "low-tech" approach taken by the state in this case—quite modest in comparison to most irrigation investments in Northeast Brazil—little input from an irrigation agency was required, since the equipment could be bought by individuals on the private market with credit provided through the project.

A project like PROMOVALE most needed an agile response from the state electric utility to demands for power hookups from the new irrigators—as well as ready accessibility for the new irrigators to credit for purchase of the pumps. The governor and his lieutenants made sure that the power utility and the banks did not drag their feet. This contrasts strikingly with the Bank-financed Ibiapaba project in the same state and at the same time. Even though Ibiapaba was the only project to include an electrification component, the production benefits to be gained from newly irrigated farming were not fully realized *precisely* because of the difficulty farmers had in obtaining power connections for irrigation. Many went ahead and irrigated anyway—using the more expensive diesel rather than electricity, and even when the power lines passed overhead. Ibiapaba could not get satisfaction from the electric utility, in sum, because it did not have the same single-minded attention from the state's governor that PROMOVALE did.

Studies of coordination between public agencies in various countries have found that they usually do not have much to gain from it.[27] In fact, they often have a lot to lose—namely, autonomy, control over the pace and quality of what they do, and the power that results from doing good work. On the few occasions when coordination has worked well, the studies found, it was perceived by all the agencies involved as urgent, and as the *only* way to solve a problem that was afflicting more than one agency. In the Northeast projects, the frequency of takeover in itself shows that coordination was *not* the only possible way to solve a problem. In most cases, moreover, only one or a few agencies saw high-quality and timely project execution as "urgent." The project unit, for example, had much more at stake than the executing agencies in seeing that the project was carried out successfully, because the project was its main activity, or the *only* one.

The successful episodes of coordination cited above in the Northeast projects had a different underlying structure than the failures. This explains why these episodes could involve the same agencies that were named unsuccessful at coordinating in the chronic laments of the supervision reports. Not only were these better moments episodic and ad hoc, as noted above, but they had the two ingredients of successful coordination found in the studies cited above. First, all participating agencies felt a strong sense of urgency because of (1) disaster-type circumstances that threatened the economy of the state and its social fabric—drought, epidemics of crop disease—or (2) an "order" to coordinate at a particular moment from a strong authority,

usually the governor, who held power over *all* the agencies, including the project unit itself. Second, coordination was the *only* way to carry out a particular task; effectively combating disease in the orange groves of Sergipe, as discussed in Chapter 5, could be done *only* with a combination of subsidized credit and extension. In order for projects to capture coordination of this variety in their design, they would have to focus on narrower tasks that were considered more urgent, and/or concentrate the power over a project within a single agency. I return to these themes in Chapter 5.

Good Governors and Hard Deadlines

Many of the stories of successful project implementation revealed a strong and highly supportive governor in the wings. The demanding governors (or state secretaries) provided protections that were crucial to successful project implementation: (1) protection from the pressure to hire mediocre staff, or to fire excellent staff on political grounds; (2) protection from pressure to make technically undesirable choices; and (3) protection from shortfalls or delays in the funding transferred to the projects from central governments—delays that governors and their appointees lobbied forcefully to prevent. Poorly performing agencies and projects were chronically deficient in these protections, as revealed again and again in supervision reports.

Though the kind of political support provided by the governors obviously helped, it is important to understand how it changed project design. To ambitious governors, the Northeast projects represented less an integrated package than a menu from which they could choose one or two components of their liking. They rarely saw the complete projects as vehicles for making a political mark, because they considered them too complex, too inflexible, too long in planning and execution. The projects did not, as the governors said, produce "results." A supportive governor, therefore, did not simply "buy" the project in its entirety. He also re-molded it to his liking. If he was prevented from doing so by the Bank, the project agencies or SUDENE, he lost interest or fashioned his own more modest project outside "the Bank project." Or, as noted above, the backing off was sometimes associated with support by the governor for a "signature activity" within the project, which helped to make a *piece* of it work well:

In *Sergipe*, the governor fashioned the project around rural water supply—140 simple systems, 2,500 cisterns to catch rainwater from roofs, and 600 small communal ponds. (He also financed roughly *three* times that number of cisterns out of funds raised independently of the project.) In *Piauí*, the governor "bought" the land-purchase component of the project in particular, because it produced quick results that could be celebrated in dramatic, highly publicized ceremonies where landless peasants received their titles. In *Pernambuco*, the governor chose small-farmer credit fashioned around actions to break certain bottlenecks in the production of certain crops; the state government supplied the majority of credit funds from *outside* the project (see Chapter 3), moreover, and at a time when project credit was not even working well. In *Ceará*, the governor wanted to bring private, small-scale riverine irrigation to a particular valley; when the project unit didn't allow him to refashion the Bank-funded project in this way, he raised his own additional resources in Brasília, and was forced by their paucity to be modest in his approach. The result was the PROMOVALE project mentioned above, completed within his term and considered by the staff of the project unit to be "better" than any of the three Bank-funded projects in the state.

On some occasions, the Bank and/or the Brazilian coordinating agencies resisted the governors' attempts to remold the projects. They worried that the projects would be diverted from their course, often to serve narrow "political" ends. This concern was well-grounded in experience, though "diversion" or "meddling" could be associated with good results as well as bad—as illustrated below. On other occasions, the Bank tried to accommodate the "menu approach," recognizing the advantages to be gained from strong support of the projects by governors. Some Bank staff and Brazilian agency managers felt that SUDENE, rather than the Bank, was the "culprit" in terms of inflexibility, often not allowing even constructive re-inventions of the projects to take place. But the prevailing impression among the Brazilian governors, and agency managers and staff, was that the projects were difficult to change. Even when the Bank or SUDENE were receptive, they said, obtaining permission for such changes placed burdensome demands on their scarce time and political capital, and resulted in the loss of precious implementation time. Sometimes, however, agency managers or technicians themselves turned down gubernatorial requests to which they did not want to accede, by pointing to the Bank or SUDENE as an excuse. Though their reasons for denying the governors' requests may have been justified, the habit of pointing to the Bank and SUDENE as the "culprit" simply added to the governors' impressions that the projects were not easy arenas for acting out their development visions. Even though the Brazilians and the Bank had successfully "sold" the second-generation projects to the region's governors in the mid-1980s, then, their enthusiasm and commitment waned considerably within a few years.

The demands made by the "good" governors on their technocrats often led to better results than those produced even by the most serious technocrats, when left to their own devices. The governors did not necessarily have better approaches in mind than the technocrats. Rather, the constraints and pressures under which governors operated

caused them, at their best, to demand performance from the agencies under their control in a way that the institutional environment of the projects did not. The "good meddling" merits attention, furthermore, because the governors mobilized additional resources if they could refashion a project to their liking—an unforeseen and highly desirable outcome, particularly in the present era of continued fiscal crisis in Brazil. The rest of this section discusses how and why the support of governors changed project design. The following two chapters treat the mobilization of additional resources.

When supportive and demanding governors were in the wings of project success, their desire to change the project took four forms: (1) they wanted to shorten the time the projects took to be implemented, and hence the nature of its tasks, so that it could "produce results" within their four-year mandates; (2) they wanted to "massify" the project—to broaden its reach in terms of numbers of beneficiaries, and (3) to narrow down its actions to a single activity, a single organizing logic, or a narrower or different geographic area; and (4) they gravitated to project activities that addressed problems perceived as urgent by a large number of public officials and constituents—drought emergencies, clamors by the rural population for drinking water, widespread concern about epidemics of crop disease that threatened to decimate an important crop; if the project as designed didn't focus exclusively on such a widely felt need, they tried to refashion it so that it would.

Four Years vs. More

The first generation of Northeast projects was meant to be carried out over a period of five years, but took up to nine years to be completed and still had unexpended balances of 41 percent of appraised expenditures at project completion (Table 1.9). As a result, the Bank lengthened the implementation period for the second generation of projects to eight-and-a-half years, with a justification that seemed eminently reasonable: the very difficulties of the institutional and economic context made it unrealistic to expect more timely execution, and the broader "institution-building" goals of the rural development projects required more patience.[28] Given this experience, one would think that the shortened four-year horizons of the governors would result in more problems. But shortening the time period removed one of the major obstacles to getting projects executed on time—the lack of political support and enthusiasm. This shortening could also improve the project's quality and—by reducing the delays that are chronic to the implementation of such projects—keep costs down.

Short is not always better than long, of course, and can displace a "more sensible" longer-maturing approach. Political pressures to get things done rapidly and conspicuously may cause waste and foolish corner-cutting, undermining more "serious" long-term efforts. But in the cases presented below, a shorter-term solution was substituted for a longer-term approach *and* turned out to be better. By tailoring the project cycle to the political cycle, and offering technically valid short-maturing alternatives, projects can increase the incidence of the "good" kind of political support. This is exactly what the "loyal" technocrats did in the better-performing cases, when forced and enticed to do so with "tough love" from their governors.

A *shorter* time period, in sum, elicited the support and the innovative problem-solving energy that longer, more "understanding" time periods did not. Though projects with lots of time seemed to make good sense because of the sheer difficulties of getting things done and learning in an environment like Northeast Brazil, the longer time periods brought a different set of problems.

Fear of Failure

Dynamic agency managers themselves felt pressed to produce rapidly, whether or not their governors were urging them to do so, simply out of a strong dedication to their work. They commonly believed that their own tenure would be shorter than the life of the project, that political *and* professional interest in what they were doing was fickle, and that their project could therefore not afford to be painted with the brush of delays, murkiness, and insignificance. Within the second-generation program, the state of Bahia's agrarian-reform and settlement activities provide a telling illustration.

Two kinds of deadlines hung over the heads of the managers of project agencies carrying out agrarian reform. First, the agricultural calendar dictated that if the project missed the beginning of the planting season in providing land, infrastructure, credit, or inputs, a whole *year* would be lost. Second, these managers felt that the political climate around agrarian reform, which had suddenly turned sympathetic, would not last that way for very long. "We figured we had only a year or two," they said, "before the axe would fall." These fears had just as energizing and transforming an effect on the way the projects were implemented as did the four-year horizons of the governors discussed above.

Not meeting the deadline of the planting season would mean that the newly settled land beneficiaries would have no food to eat, let alone income from selling their produce. This would require spending scarce agrarian-reform funding on transfer payments for the newly-settled farmers, mainly in the form of food subsidies. Subsidizing the new settlers this way, in turn, would sully the reputation of the reform as a "welfare" measure rather than a "productive" one—adding to the ammunition of those who argued

against such programs.[29] More generally, the temporarily sympathetic climate for agrarian reform kept agency managers on a short tether in terms of expropriating and parceling the land, and getting the beneficiaries settled into shelter and producing. This resulted not only from the sense of impending termination of the opportunity for reform, but from the difficulty of enforcing the law in a place like rural Northeast Brazil, even during politically sympathetic times. Legally-expropriated landowners, as well as large land-grabbers, harassed and intimidated the new claimants to the land, often with the backing of local authorities and even when the law was clearly on the side of the new settlers.[30] If the new owners were conspicuously settled on demarcated plots, living in houses they had built, and already planting, these extra-legal challenges from powerful operators were less likely to occur or be successful.

In the course of trying to act quickly, agency managers ended up reducing the "standards" of settlement professionals and, at the same time, improving significantly the effectiveness of these projects. Instead of putting everything into place, as is the typical practice, before the new owners are settled—roads, schools, health centers, houses—the Bahians gave first priority to "getting production going." This meant leaving education and health to a later stage, and not providing the house itself but, rather, only credit and sometimes materials for "self-help houses" to be built by the settler once he was on the land and often *after* he planted a first season's crops. Many of the new settlers therefore lived in tents for several months after moving to their new plots. The fear of the deadlines also meant postponing the time-consuming permanent demarcation of the lots until later, relying initially on a rustic and temporary demarcation using rope and stakes, to which the land recipients agreed, and in which they participated. The deadlines also caused agency managers to hold off their staffs from trying to organize settlers to farm part of their lands collectively—a common and time-consuming approach of agricultural professionals to small farmers throughout Latin America.

To those familiar with the criticisms of prevailing approaches to land settlement, these changes would seem to be obviously desirable and cost-reducing.[31] Settlement has gained a reputation for being unacceptably costly, and difficult to carry out because of the heavy burden placed on state agencies to come up with a set of highly coordinated and timely actions. But the professionals carrying out land-settlement programs have often resisted the more modest and less centralized approaches illustrated by the Bahian story—just as road engineers have resisted reducing construction standards for low-volume rural roads.

The penalties of the agricultural and "political" deadlines, in sum, pushed the highly committed agency managers to move fast. These deadlines were just as effective as the fixed terms of the governors in eliciting more expeditious project execution and better approaches to designing projects and carrying them out. The deadlines, rather than a pre-existing project design, also dictated the order in which things should be done—what should come first and what should be given second priority or even eliminated. The results, in certain ways, were even more consistent with the goals of the program than the appraised projects themselves—to the extent that the "pressured" result reduced the financial and administrative burden on the state, and was more likely to be carried through to an income-producing conclusion for the settler than was the existing approach. These kinds of relentless pacing devices arising from outside the project were a common theme in other stories of good performance.

Massification

The desire of "the good governors" to do things in shorter time periods and narrow them down acted together with their equally strong desire to reach large numbers of constituents—to "deliver," through the projects, to a large constituency. In technocratic terms, this political message got translated into the term "massify" —to do a project in a way that would reach large numbers of people. It also could be seen as another way of talking about cost-effective delivery of public services, since broader coverage could only be achieved by reducing unit costs. "Massify" was a word particularly heard in Pernambuco around the attempts to open up credit access to small farmers, and in Sergipe around the governor's emphasis on rural water.

The new interest of state governors in "massifiable results," no doubt, was influenced by the Brazilian move toward democratization in the 1980s. It was also a function of the steady decline of the power of landed elites, whose near-feudal relations with their tenants enabled politicians to rely on them (the landed) to deliver large blocks of votes. With democratization, candidates for state and local office increasingly had to convince large numbers of constituents, rather than only a handful of rural elites, to vote for them.[32] The desire of politicians to deliver to large numbers of their constituents would, at first glance, seem perfectly compatible with the goal of the Northeast projects to reduce poverty and increase the productivity of small farmers in cost-effective ways. But "reaching large numbers of people" went across the grain of the projects in two ways—(1) their *area* concentration and (2) the professionalism of the managers and staff.

The Northeast projects were grounded in the concept of area development, inspired by the growth-pole view of regional planning in the 1960s. Area development required the selection of a certain *part* of a state that seemed to have

more potential for growth than others, as well as a concentration of small and landless farmers. The agricultural-production focus of the projects, moreover, meant concentrating attention mainly on those who managed farms and were capable of improving their productivity. This excluded those who owned no land, representing a majority of the rural population in many Northeast states.[33] The second generation of projects was less inclusive of the poorest than the first because it eliminated (1) credit for operating capital (as opposed to longer-term investment credit), which tenant farmers *had* been able to obtain under the first-generation projects, (2) social services (health and education), and (3) public goods (roads, electrification)—all of which reached a larger population than just those managing farms. This greater exclusivity is reflected in the much smaller role of indirect beneficiaries as a percentge of direct beneficiaries in the second-generation projects—20 percent as compared to 92 percent in the first-generation projects.[34] Most Bank staff did not view the PAPP projects as less targeted on the poor, pointing to certain new components of the program as designed specifically to reach landless and near-landless farmers—namely, the community-participation component and the regionwide land-tenure project.

From the production-oriented point of view, the exclusions of the second-generation projects made sense. From a political point of view, however, they made for reduced political appeal. Even in the more inclusive first-generation projects, the appraised number of direct beneficiaries represented only 5 percent of the rural population of the states, and 3 percent of their total population (Table 2.2). Doubling those percentages to include indirect beneficiaries makes them 10 percent and 6 percent, respectively, still not high from a political point of view.[35] The second generation, in contrast, promised to reach a larger percentage of the state's population than the first—more than doubling the coverage of a state's physical area from an average of 23 percent under the first-generation to 56 percent under the second (Table 2.2), and more than doubling the average number of direct-beneficiary families from 23,000 to 58,000 (Table 1.1). But that still was not "massified" from a political point of view: appraised direct beneficiaries of the PAPP projects still represented only 16 percent of a state's rural population and 8 percent of its total population.[36] Even if all of the rural population of the project areas were included among their beneficiaries—given the public-goodness of some of the investments—this would have increased the "political constituency" of the projects to only 28 percent of a state's rural population under the first-generation projects and, more significantly, 53 percent under the second (Table 2.2). Under the second generation, however, the public-goodness of the projects declined significantly because of the exclusion of infrastructure, health, and education.

From an exclusively political perspective, then, area development limited the number of people reached by a project in three ways: (1) the limitation to the inhabitants of a particular area of the state, (2) the limitation to those within the project area who had secure and collaterizable access to land or, another way of saying the same thing, (3) the concentration on private-good-like services—credit, extension, irrigation, input supplies, land-title regularization—as opposed to public-good-like activities like health, education, drinking water, roads, electrification. Though all of these limitations were justifiable on developmental grounds, they also reduced the projects' potential for "massifiability."

This perspective helps explain the popularity of rural water in the second generation of Northeast projects, among technocrats as well as governors (see above). In principle, rural water supply could benefit everyone—landed or not—in contrast to the agricultural production services around which the second-generation projects were built. As evidence of this greater political inclusiveness, rural water was the component that most commonly spilled outside the project area into other parts of the state—driven by a combination of a governor's support and willingness to find additional funding to extend the program.

A similar explanation can be given for the popularity of the short-term credit programs for landless farmers—CAP/CEP.[37] Though this component amounted to a small percentage of the total financing of the Northeast projects (and the Bank would not fund it), it was among the most popular with beneficiaries and project managers and staff, who worked hard to raise more funds for it. Though credit was a private good, unlike water, the short-termness of the CAP/CEP credits and the institutional setup of the program outside the formal banking system made it possible for poorer farmers without collateral to have access. This promised to broaden the "political" reach of the project substantially, and extended it further down in the income distribution.

Finally, the concern for "massifiability" and the distinction between private and public goods help explain the preference expressed by many Brazilian commentators on the first-generation projects for the health, education, roads, rural-electrification and drinking water components which, they said, "worked better."[38] The consistency of such judgments was surprising given that (1) these components, like the CAP/CEP credits, represented insignificant shares of total project funding, except for roads—for health, 4 percent appraised and 3 percent actual (which also included some expenditures for drinking water systems), and for education 5 percent appraised and 6 percent actual (Table 2.1); (2) supervision reports consistently portrayed the health and education components as riddled with trouble; (3) drinking water was not even an "official" component of

the first-generation projects, minor expenditures on it being embedded in health and other components;[39] and (4) rural roads, though significant in the first-generation projects (20 percent appraised and 19 percent actual), were excluded from the second generation for the reasons outlined in Chapter 1.

Though there were various reasons why the results of health, education, roads, and electrification stood out over the agricultural-production components, it was clear that participants and other observers were impressed with the reaching of *whole* communities by these investments. Even though the gains made in health and education were usually not sustained by the state agencies, as chronically attested to in supervision reports, this did not seem to sully the image of strong community-wide impacts. Though health, education, and road investments might not be sustained or maintained, in short, they represented a vision worth fighting for—to politicians *and* technocrats alike.

Even if an area development project limited the number of constituents reached directly, why would that necessarily reduce a governor's interest in supporting it? After all, securing a large well-funded project from the World Bank was a political coup in Northeast Brazil, and certainly better than no project at all—even if it wasn't designed to garner as many votes as one would like. Standing behind a project of this nature, however, was not without cost to a governor. He had to turn down the angry demands of mayors just outside the project-area boundaries to be included in the project area—a politically costly denial, especially when it involved mayors who had loyally supported one's election. (Because of this difficulty, the "technically" defined project-area boundaries often grew quite a bit during the appraisal period and even during implementation.) He had to turn down the requests of his loyal cronies to employ their unqualified friends and relatives in the project unit. (As one state secretary said, "the Bank project was my biggest headache, because the higher salaries of the project unit attracted job requests like flies. If I didn't tell the project unit to hire them, I lost their votes; if I did, I undermined the project.") He had to turn down the requests of politically important landowners to have dedicated staff fired or transferred because they were "upsetting the power structure" in a region. He had to turn away the requests of contractor friends for special privileges in bidding. The managers and staff of the better-performing projects always spoke reverentially of those governors and state secretaries who protected them from these kinds of interventions. Though supporting a World Bank project could be politically costly to a governor, it was worth it *if* the political returns were also high—as they promised to be with "massifiable" actions. When governors "bought" the projects, then, they often did so only if they could massify them.

Governors who could not massify their projects, or were not interested in using them to achieve broad impacts, often used them for other purposes. A common one was to use project financing to fund the ongoing activities of state agencies, particularly the extension service. In this less constructive scenario, governors saw the projects as relieving their fiscal problems—regardless of what the projects actually did. When governors viewed the projects in this less entrepreneurial way, the projects tended to lapse more and more from their developmental purpose. The governor, happy to at least have his fiscal worries reduced, was not interested in riding herd on the project agencies to perform well. It was this riding herd that helped spur good performance in many of the better-performing cases reviewed here.

"Massifiability," finally, should not be confused with a *large number* of components—which this review and previous ones argue against. The projects for which the term was most used, after all, were those that focused most on a *single* component—water in Sergipe and credit in Pernambuco. Nor is area development necessarily undesirable because it is not massifiable. Rather, in order to draw the support of "good" governors, projects will have to appeal to these leaders as vehicles for realizing their *political* goals. Massifiability of a single component across a large political constituency is only one way of doing this; concentration on public-good-like investments, rather than private goods like agricultural production services, is another; and choosing a region for "area development" that contains a significant percentage of a politician's political constituency—or an important segment of that constituency—is yet another.

Doing the Right Thing

There was a second, and more indirect way, in which the area development projects were incompatible with the political desire to reach the largest number of constituents possible. "Reaching large numbers," or developing a service-delivery model that promises to do so, would seem to be an obvious goal of area development projects like the Northeast ones. But the professionalism of even the most serious and dedicated technicians produced a style of operating that often conflicted directly with that goal.

The professionals, understandably, wanted to do things "right." Road engineers wanted to build roads wider than expected traffic volumes warranted, because that's how roads were "supposed" to be built and because you wanted to have "sufficient" capacity in place if and when the larger volume of traffic materialized. Irrigation engineers wanted to do large irrigation projects rather than small ones which, in comparison, seemed piecemeal and insignificant. This kind of "misplaced" or uneconomic professionalism is usually attributed to engineers, or to those without distribu-

Table 2.2: Northeast Brazil Rural Development Projects: Significance of Project Area in the State

Project	Direct Beneficiaries[a] (Individuals) as Percentage of: Project Area Rural Pop.	Project Area Total Pop.	State Rural Pop.	State Total Pop.	Project Area as % of State[b] Rural Pop.	Total pop.	Area
POLONORDESTE							
Rio Grande do Norte	28.0	18.1	9.2	4.8	32.9	26.8	39.6
Ceará/Ibiapaba	20.5	16.5	1.1	0.7	5.5	4.0	3.3
Paraíba/Brejo	25.6	19.8	2.4	1.4	6.0	6.9	2.8
Bahia/Paraguaçu	12.4	8.6	1.9	1.1	15.6	13.1	10.9
Sergipe/Tab.Sul.	27.7	18.4	8.3	4.2	29.9	23.0	27.0
Pernambuco/Agr.Set.	15.3	9.5	3.3	1.5	21.6	15.9	11.0
Ceará II[c]	9.3	5.1	9.2	5.1	100.0	100.0	100.0
Piauí	15.0	7.3	4.7	2.8	31.6	38.7	9.7
Maranhão	21.0	16.2	6.9	4.8	33.1	29.5	15.4
Bahia II	28.8	20.3	4.6	2.3	0.7	11.5	13.7
Subtotal							
Simple Average	20.4	14.0	5.2	2.9	27.7	26.9	23.3
PAPP							
Segipe		14.0	16.8	7.7		48.1	74.1
Rio Grande do Norte		20.4		8.3		40.6	
Bahia	17.5	10.4	8.3	4.2	47.8	36.1	47.4
Piauí	41.4	18.2	26.2	13.4	63.3	73.5	58.0
Pernambuco		11.0	15.5	5.9		49.3	63.1
Ceará	25.6	11.5	24.8	11.6	97.0	90.7	98.3
Paraíba		14.1	14.3	6.8		48.2	45.4
Minas Gerais	30.9	16.1	4.4	1.4	14.2	8.2	20.7
Maranhão	29.6	20.1	13.3	9.1	45.0	39.0	40.2
Alagôas		17.9	16.1	8.2		40.3	54.1
Subtotal							
Simple Average	29.0	15.4	15.5	7.7	53.4	47.4	55.7

Sources: For project area population, same as Table 1.1.

For state population, FIBGE (various years). The base year for population figures varies from state to state, depending upon the year in which the Staff Appraisal Report was written. Population figures for POLONORDESTE projects are based on the following years:

Rio Grande do Norte, Ceará/Ibiapaba, Bahia/Paraguaçu, Pernambuco/Agreste Set. = 1970;
Piauí = 1975;
Paraíba/Brejo, Segipe/Tabuleiros Sul = 1976;
Ceará II, Maranhão, Bahia II = 1980.

For PAPP projects, the base years are: Sergipe, Rio Grande do Norte, Pernambuco = 1985; for the remaining projects, 1980.

a. Appraised rather than actual figures were used sa as to capture the political significance of the project at its inception. Individual beneficiaries are calculated as the number of direct beneficiary families (see Table 1.1, note b) multiplied by 5.

b. Project area rural population (pop.), total pop., area as % of state rural pop., total pop., area.

c. Ceará II: unlike the rest of the projects, this project covered the entire state.

tional concerns. But it is found broadly among professionals of various fields and various political stripes. Project units working on land settlement, for example, insisted on doing settlement the "right" way—which was, as discussed above, too costly, too demanding of the state, and subject to long delays. Field staff working on community water projects in Piauí wanted to stay with a community for three years before moving onto the next one—in order to make sure that the water-using association was so good that maintenance and operation would be guaranteed. Likewise, the extension service wanted to work in a few villages intensively, rather than many, to make sure it could show some impact on yields.

Whereas the technocrats were "right" in not wanting to dilute their model over too many farmers or communities, there was nothing about their professionalism that forced them to *change* the model—namely, to search for an approach that could reach large numbers and *still* have an impact within a reasonable period of time. Doing things "right" professionally meant *not* worrying about these issues, or leaving them to a second plane. Though the technocrats might have had the knowledge and the dedication to do things differently—and though economists watched over the birth of the Northeast projects like hawks—this did not translate into an environment of pressures to "economize" or "maximize within constraints" the way the governors' pressures did.

Governors and other elected leaders are often portrayed as making projects more costly than they should be and undermining their quality—as not allowing the technocrats, in other words, to "do the right thing." But it turns out that "the right thing," from an economic point of view, does not always come naturally in the technocratic world—even when some of the technocrats are economists—because there's no strong push to do it. Though it might seem difficult to design projects in a way that would elicit the support and protections of "good" governors, the discussion so far provides a few simple and obvious suggestions: (1) design projects, or project phases, to coincide with the four-year time span of a governorship, (2) satisfy the desire of supportive governors to obtain visible "results" in that time period, and (3) facilitate the desire of powerful political supporters to organize projects around a single "signature" activity.

Notes

1. Relating the performance of organizations to the relative ease or difficulty of their tasks has a long tradition in the literature. Lawrence and Lorsch (1969), and Thompson (1967) were seminal contributions. Some applications to development projects are Hirschman (1967) with respect to large World Bank projects, Tendler (1968) with respect to electric-power generation and distribution by public-sector enterprises, Lamb and Muller (1982) with respect to the Kenya Tea Development Authority, and Tendler (1982) and Israel (1987) with respect particularly to the comparison between projects in the infrastructure and social sectors.

2. The seminal contribution to this literature is Landau (1969).

3. In a few cases, a state land agency was also created by the project, but only if there was none. The new project units were usually formed within a preexisting institution—most commonly, the state agricultural planning agencies. The Sergipe project unit, one of the best-performing, was an agency unto itself.

4. The project units did not necessarily take over all the APCR functions, and often relied on field staff of the extension service to do at least some of the work. But in that the APCR component funded some project-unit field staff in several states (Table 1.8), this gave the unit an executing presence that made the component different from all the others.

5. The Pernambuco program's innovative interventions in agriculture are another example. Funding and field staff for these activities, not foreseen at appraisal, came partially out of the APCR component.

6. When the second-generation projects were being appraised, the Bank expected that a separate Northeast water and sanitation project would be designed and approved within two or three years. Rural water supply was therefore allowed into the second-generation program, but only provisionally for the first two years, and accounting for only 1.6 percent of total appraised costs (Table A.4). The failure of the separate water project to materialize partly accounts for the unanticipated increase in the role of the water supply component. For drinking water-supply expenditures in the second-generation projects, see note 39 in Chapter 2.

7. These distinctions between irrigation and water were pointed out to me by Hugo Eduardo Beteta, as were those between urban and rural water described momentarily.

8. Beteta attributes the difficulty that water planners have in acting on what he found to the tradition of separating "social" uses and justifications for rural water from productive ones.

9. The Bank never insisted on maintenance of already-constructed roads as a condition for disbursement on new ones, the way it did in water—partly because roads were dropped from the second generation of Northeast projects and partly because maintenance failures are not as conspicuous in roads as they are in water. See Cook (1985) for issues regarding maintenance of roads built under the POLONORDESTE projects.

10. See the end of Chapter 4 for other lessons about rural infrastructure related to land tenure and the size distribution of landholdings.

11. The theme of "healthy" competition between public agencies has been around for some time. Landau (1969) explored its favorable effects on innovation in the public *and* private sectors; Bunker (1985) pointed to its role in keeping down corruption in a comparison of two agencies providing services to colonization projects in the Amazon. Marshall (1982) discussed its importance in the U.S. Model Cities programs of the 1960s, which explicitly promoted interagency competition by channeling funding to "alternative" local organizations as well as to city and state governments. These local governments, responding competitively to the more innovative performance of the alternative organizations, eventually adopted the alternative models themselves. At the Bank, Lamb (1982) called such competition in the public sector a "market surrogate" for the healthy competition occurring between private firms, and Israel (1987) devoted a whole chapter to these "competition surrogates."

12. Schmitz (1990: 17) and Bell et al (1982: 132 and 1984, as cited in Schmitz) point to the same kind of positive externality associated with the "drift" of professionals between firms in the *private* sector—Bell with respect to infant-industry protection in general and Schmitz with respect to the Brazilian computer industry.

13. Operational suggestions following from this discussion of the relative ease and difficulty of tasks are presented in Chapter 5, after presenting further examples concerning agricultural research and extension.

14. See Batt (1989) for a detailed description of this situation and the history of attempts to improve it.

15. Central Bank regulations have long prohibited public agencies from investing in the overnight, but the practice is widespread throughout the country. Rates on these overnight investments could vary considerably from one month to the next, and between one depositor and another, because the rates were negotiated individually between the bank and the depositor on large deposits like these.

16. A few project managers included these overnight earnings in the "counterpart" they reported to the Bank, and against which the Bank disbursed its own share of project financing. Though certainly a "novel" interpretation of central-government counterpart, this did not violate the spirit of

the counterpart agreement—since returns on overnight accounts were paid to investors out of the Central Bank.

17. The "creative" investment of project cash balances should not be attributed solely to the peculiarities of the Brazil's economic situation and macro policies. In a large Bank-funded urban development project in India—a country with almost the opposite picture in terms of inflation and macro policy—project managers also attributed great importance to their cash balances (Sanyal and Tewari 1990: 26). Competition by banks for the large cash balances that flowed into such donor-funded projects allowed project management to exact a *quid pro quo* from the bank where it chose to place its deposits—in this particular case, the opening of a small-enterprise credit fund consistent with the objectives of the project. In a similar fashion, the relatively large amount of outside donor funds available to the Grameen Bank in Bangladesh have given that institution considerable bargaining power vis-a-vis the banks competing for those deposits (Sanyal, personal communication).

18. Sometimes, the agent that ultimately replaced the original executing agency itself "lobbied" for the takeover. The Irecê cooperative in Bahia, to which the project unit handed over the irrigation and agricultural extension components, "lobbied" the project unit *and* state legislators to get the component away from the state agencies.

19. After the first two years, as explained in note 6 in Chapter 2.

20. Several Brazilian agency managers and staff expressed a desire for more of a presence of Bank supervisory staff during implementation, contrasting this with the "extravagant" Bank presence during appraisal.

21. Staff appraisal reports for five PAPP projects projected salary costs at an average 48 percent of total agricultural extension costs (Bahia 45 percent, Piauí 51 percent, Pernambuco 30 percent, Paraíba 82 percent, Maranhão 30 percent).

22. Though this justification was used in the first-generation projects, a somewhat different one was used in the second, where the Bank funded salaries and other recurrent costs on a declining basis as a *quid pro quo* for the federal government's commitment to abolish other competing rural programs. That the federal government found it difficult to keep that commitment had to do partly with the salary-intensive nature of these similar programs, and partly with the fact that they offered additional opportunities for political leaders at the national and regional level to have their "own" development programs.

23. Table 1.9. Extension expenditures went up in every state but Bahia.

24. See, for example, World Bank (3/30/89, para. 32).

25. In some cases, Bank staff sensed that even if it were desirable to assign formal responsibility to only one agency they deemed strong, it would nevertheless be politically difficult. They therefore deliberately blurred the issue in the multi-year legal documents constituting the project agreement. In other cases, when Bank staff thought that an agency might be weak, they designated responsibility to more than one agency as a way of building a system of checks around a weak agency. This diffusion of responsibility also provided some formal basis for subsequent takeover, if that proved necessary, by an agency deemed more reliable at appraisal—usually the project unit.

26. PROMOVALE was actually the initiative and pet project of the vice-governor, who was from the region of the project. He was strongly backed in this endeavor by the governor and the State Secretary of Agriculture.

27. See Weiss (1987) and the studies cited therein.

28. See, for example, World Bank (6/14/85).

29. Schmitz (1990: 18) points to an equally unsympathetic outside environment in explaining the high standards of the Brazilian informatics agency—the Special Secretariat for Informatics (SEI). He attributes the unusual lack of corruption in that agency—remarkable for an agency with such "rent-seeking" opportunities—to the unpopularity in Brazil of informatics policy, and the resulting feeling by SEI officials that they were constantly on trial and could ill afford to be seen as corrupt.

30. This happened even with the Bank-funded Alto Turí colonization project in western Maranhão, when large squatters, with the backing of the state, would not recognize the federal government's title to the land—a problem that plagued that project for many years.

31. Most of them are recommended in the Bank's 1985 review of land settlement projects (World Bank 5/1/85).

32. Melo and Moura (1990) describe how this same transformation affected the design of the Bank-funded urban development project in the state capital of Pernambuco, Recife. The mayors of the municipalities constituting the greater Recife region pressured project management to change the project in a way that would respond first to the demands of the most organized and vocal squatter groups. The increasing participation of legislative bodies (municipal and state) in approving large projects like this one also channeled more constituency-based concerns into project design.

33. For example, 65 percent of rural producers owned no land in Paraíba, 60 percent in Ceará, and 83 percent in Maranhão, where the percentage was highest (World Bank 5/26/87d, 9/26/86b, and 5/26/87c, respectively).

34. Appraised direct beneficiaries seemed to include mainly farmers receiving agricultural extension and credit. The figures on indirect beneficiaries do not appear in the tables because of considerable problems of inconsistency in their reporting in the appraisal results, double-counting of indirect and direct, and uncertainty about how. They were estimates. They are referred to here only as a rough indication of the expected impact of the projects from a politician's point of view.

35. For purposes of this calculation, the number of beneficiary families was multiplied by five to get an estimate comparable to state population figures. The number of actual direct beneficiaries in the first-generation projects was slightly more than that projected (104 percent of appraised, Table A.3) but appraised figures were used here in order to make comparisons to the second-generation projects, for which actual data are not yet available. Appraisal figures are also more indicative of the "political" significance of a project at its inception.

36. Indirect beneficiaries, estimated at 20 percent of direct beneficiaries, would increase the percentages in the text to 19 percent and 10 percent respectively—still not particularly high.

37. Compra Antecipada da Produção (Advance Production Purchase) and Compra dos Excedentes da Produção (Purchase of Production Surpluses).

38. Though the Bank financed rural electrification in only one project, Ibiapaba in Ceará, some states obtained funding from other sources for rural electrification during the period of project implementation.

39. It was not possible to separate out drinking water supply expenditures from the other expenditures of the "water resources" (5 percent) and "health" (5 percent) components of POLONORDESTE, as noted in Table 1.7. Drinking water supply was included in "water-resources," in Pernambuco, Bahia I, Bahia II—and in "health" in Maranhão, Ceará, Rio Grande do Norte, Paraíba, Sergipe. For a breakdown of appraised expenditures within the "water resources" component of the second-generation projects, see Table A.4.

3. *Unexpected Finance*

During the entire period of implementation of the Northeast projects, Brazil was afflicted with increasing problems of inflation, debt, and fiscal austerity. Inflation ranged from 30 percent to 80 percent in the 1970s and early 1980s, and to three digits thereafter, when the robust growth of the earlier period turned into the prolonged stagnation and debt problems of the 1980s. The Northeast projects suffered throughout the entire period from delays in the transfer of federal counterpart funding to the states—accounting for 65 percent of the funding committed to the first-generation projects and 52 percent of the second (Table 1.1). When funds finally arrived, they were often substantially less than programmed for—either because of budget-trimming by the executive or the legislature, or because inflation had eroded their value. In recognition of Brazil's aggravated problems of external debt, the Bank raised its share of the financing in all its Brazilian projects—in the Northeast projects, from 35 percent under the first generation to 47 percent under the second. The idea of requiring counterpart contributions from the state governments was never raised because fiscal decentralization was not an issue of concern to the central government or the Bank.

Given this darkening economic and fiscal picture, it is surprising to find that many of the episodes of better performance involved *increased* mobilization of resources—outside the project, and beyond those expected at appraisal. These efforts to raise additional funds were often paired with successful efforts to reduce costs. Also surprising, the unanticipated resource mobilization often occurred at the municipal rather than state level, spearheaded by mayors and municipal councils. Like local government in much of Latin America, Brazilian municipios are typically portrayed as fiscally deprived, administratively inadequate, clientelistic, and corrupt. The per-capita transfers they receive from the federal government are low, their authority to raise their own revenues is limited, and it is politically costly for them to exercise the revenue-raising authority they do have (Mahar and Dillinger 1983, Silveira 1989). For all these reasons, municipal governments hardly appeared in the design of the Northeast projects.[1]

When donors design rural-development and other projects, they take finance as a constant or an "independent variable" —something that can "cause" a project but cannot be its effect. Financing or commitments to it are arranged for *before* the project gets started, and are not meant to be elicited by the process of implementation itself. This seems sensible, in that it would be difficult for a donor to elicit matching finance from a recipient *after* the donor has delivered a handsome package of project financing. But in the cases cited here, implementation itself created incentives that caused governors, mayors, public agencies, and private individuals to *want* to contribute additional resource.

The signals that these cases give off about resource mobilization are important not only because the times have been fiscally austere, but because the cases reveal opportunities for local financing that often go unrecognized. Though these opportunities may be familiar to designers of *urban* development projects in rural areas—the Bank's intermediate-cities projects are a good example—they tend to be ignored in *rural* development projects. They merit scrutiny for the lessons they provide about projects, rural financial institutions, and public finance in general.

The mobilization of additional resources took six forms—those of which involved finance, described in this chapter, and those of which involved land, described in the following chapter. With respect to the mobilization of finance, three types of cases stand out:

- Agency managers or interested governors lobbied for *additional funding* from federal ministries and development finance institutions, diverted money from other state programs, or utilized returns gained from investing the cash balances of state agencies in the money

market. They sought the extra funds not only to make up for shortfalls or delays in receiving counterpart funding, but also to expand a certain component beyond what had been planned for at appraisal, or to fund an activity that the Bank would not. Some of these cases have been mentioned in Chapter 2 and will not be discussed further here.

- Some agency managers or governors promoted the *mobilization of savings* through banks as a way of creating capital and operational funds for lending to small farmers. This took place outside the credit mechanism of the Bank-funded projects, and at a time when the credit component of those projects was hardly working at all—mainly because of farmers' fear of taking loans with full indexing (half of the loan capital was forgiven). In addition, these programs linked deposit mobilization to small-farmer credit in a way that caused bank managers to see lending to small farmers as "good business" —an unusual reversal of the typical situation.
- When state governments offered matching funds, mayors typically cajoled their better-off landholding constituents to make *"off-the-books" contributions* to local works investments—in the form of right-of-way for road-building, fencing for the right of way, cement and other materials. In addition, these financing mechanisms subjected state agencies themselves to demands for accountable behavior because the municipios wanted the projects done fast, at low cost, and suited to their constituents' needs. That municipal government could induce state agencies to perform better is just the opposite of the typical portrayal of local government as less adequate than the more "technocratic" state agencies.

The varying forms of resource mobilization described here and in the next chapter are in some ways more different than alike, but the factors that triggered them are surprisingly similar. The following presentation of the cases stresses this structure of triggering factors which, in addition, were not usually present in the typical project environment. Briefly, those who were to benefit from the project's investments faced strong incentives to come up with part of the resources on their own—whether they were direct beneficiaries, politicians and municipal governments, or local associations. Their role in providing contributions, in turn, brought them into the project environment as demanders of accountable behavior from the institutions carrying out the project.

This chapter presents the cases of (1) "informal" financing at the municipal level of state-funded works projects, and (2) rural savings mobilization, as linked to the expansion of small-farmer credit. Because the remaining cases relate to land, they are presented together in the chapter that follows.

Raising Taxes Off the Books

Prior to the Bank's first project in Bahia, the state road fund (BNDES/FERMIN) offered loans to municipal governments for road improvements and other local works projects. To receive such a loan, the municipal council had to pass an ordinance giving the lender—the national development bank (BNDES)—first claim on its future receipts from the federal government for repayment of the loan. Though a matching contribution to the BNDES loans was not required of the municipalities, the requirement that they mortgage their future receipts was a rigorous one—especially given that such local investments were usually financed out of *grant* funds from the states or through projects.

The rigorous payback conditions of the BNDES/FERMIN loans caused the municipalities to work hard to reduce the cost of their works projects. They did this partly by pressuring local elites into making contributions in kind—materials, donating the right of way for a road, not challenging eminent-domain proceedings (a common problem), clearing the right of way if it were on one's own property, donating and putting up the fencing oneself (to keep cattle off the road). (These latter items are customarily financed and carried out by the state agency in charge of the project.) Relying partly on their political and personal relationships with their fellow local elites, the mayors were actually collecting a "betterment levy" in an informal way, which was easier and faster than enacting and collecting a formal betterment or user charge. In that this informal levy fell exclusively on the better-off, moreover, its incidence was probably less distributionally regressive than the formal tax system.

The collateral requirements of the BNDES, together with the unusual structure of the contracting relationship between the municipalities and the state road-building agency, created distinct pressures on the road agency to perform well. The municipalities had customarily "received" works projects from the state government and the road agency. But under the BNDES program, they took their loan funds and *contracted* the road agency to design and carry out a project of their choosing. Always worried about the future central-government transfers they were mortgaging with these loans, the municipalities would complain vigorously to the road-building agency when they thought the costs and the standards were unnecessarily high, or the pace of construction too slow. During the period this fund operated, moreover, a significant share of the Bahian road agency's budget came from these contracts with the municipalities, which paid the agency only after the private contractors were paid. This gave the road agency good reason to be responsive to the municipalities' concerns about costs, appropriate standards, and timely implementation.

The professional culture of road-building engineers, public and private, has tended to produce standards for roads that are often unnecessarily high—or, at the least, do not show concern for maximizing the impact of a given investment. But the financing and contracting mechanism of the BNDES/FERMIN fund made it no longer in the interest of the road-building agency to go along with private contractors in using high standards, being sloppy about the quality of construction, or allowing delay to overtake the pace of work. By making this way of doing business costly to the road agency, the structure of the road fund *differentiated* the interests of the public agency from those of the private contractors. If it did not perform well, the public agency could now lose contracts from the municipalities, be paid late by them or not at all or, at the least, be subject to constant harassment by them.

Many mayors preferred the BNDES/FERMIN loan fund to a parallel grant fund offered by the state for local works projects. The grant fund was more typical of the way works projects were financed and carried out, including those of the Northeast projects. Though the grant fund did not require that local governments mortgage their future federal transfers, the mayors nevertheless felt that the "transactions costs" of obtaining this "free" funding were a distinct disadvantage. They wanted the work completed well before the end of their term of office, and therefore had to spend their time and political capital lobbying in the state capital to obtain the funding. Even if the lobbying was successful, the mayors were never certain when the funds would be received—which in itself required further lobbying. The BNDES loan fund, though more costly in financial terms, was less costly in terms of these transactions costs, and produced more rapid results. The criteria for obtaining the funds were "technical" rather than "political," known to everyone, and consistently applied.[2]

Given the pressures for performance inherent in the structure of the BNDES/FERMIN loan fund, it is not surprising that Bahia's road-building agency gained the best reputation for getting things done and for honesty during the 1973—83 period, when the fund was operating. When the fund terminated and rural-road financing in the state reverted to its previous grant-funded form, the road-building agency suffered a remarkable fall from grace—as reflected in the complaints about its performance under the Bank-funded project, which started in the early 1980s. Looked at over a long enough period, the history of many public agencies reveals a similar cycle of episodes of excellent performance followed by poor performance. These falls from grace are hard to explain because the agency seemed to have reached maturity in a previous period. The BNDES/FERMIN story suggests an explanation that points to the organization's environment—the incentives and pressures built into the design of the road fund, and their disappearance in a subsequent period.

The incentives and pressures with which the road fund surrounded the road agency and the municipalities can reduce considerably the burden placed on formal monitoring to deal with problems of cost, delay, inappropriate standards or materials, and plain wrongdoing. The road fund, in effect, shifted some of this burden to outside parties—the municipalities—who didn't even have to be paid to do it because it was very much in their interest, and who could identify possible savings in a way that was difficult to do in a formal appraisal process. Shifting part of the burden of monitoring this way also relieves a donor like the Bank of the heavy "educational" task of convincing reluctant professionals to reduce standards to more appropriate levels, and to keep costs down. This effort occupied much of the time of Bank professionals in the infrastructure sectors, often to no avail.

Linking Credit to Finance

A second category of cases involving resource mobilization had to do with the financing of agricultural credit. This section presents the case of Pernambuco, which exemplifies the various forms that these initiatives took. In Pernambuco, the credit-finance initiatives also involved campaigns of rural bank branches to increase their deposits, and the linking of this effort to the expansion of small-farmer credit. Though these initiatives were not carried out formally under the Bank-funded projects, they involved the same bureaucratic actors, served the same ends, and hence inevitably overlapped with the projects. They also represent a striking example of the way rural savings can be mobilized and applied to small-farmer agriculture.

The literature on small-farmer credit programs and rural financial systems has criticized the exclusive emphasis of donors and governments on providing credit to the neglect of savings mobilization (for example, von Pischke *et al* 1983). Credit policies in countries like Brazil have typically required banks to lend to small farmers at subsidized rates, or central banks have provided them with capital or attractive rediscounting facilities to do so. This happened in both phases of the Northeast projects, where credit provided by the World Bank or the Brazilian Central Bank accounted for the largest single share of project financing in both generations of projects—23 percent and 30 percent respectively—*and* was both times among the most problematic components (Table 1.7). Credit disbursements under the first-generation projects were only 50 percent of expected—the lowest disbursement percentage of all the components—and compared to an average rate of disbursement at project completion of 74 percent (Table 2.1). (The land-related component was also only 50 percent disbursed, but accounted for only 11 percent of appraised costs.) In the second-generation projects, slow credit disbursement rates were

due also to farmer apprehension about taking the medium-term project credit with full indexing (according to a general price index) in an environment of near-hyper inflation—even though the indexing was applied to only 50 percent of the loan capital, the rest being treated as a grant.

In the story of mobilization of rural deposits told below, branch managers sought out rural savings as a basis for their lending. Even more unusual, their interest in mobilizing deposits provided a strong *incentive* to lend to small farmers—as explained momentarily. This created the conditions for a more sustained and genuine opening of the financial system to small-farmer borrowers than that under the Bank-funded projects; the latter provided funding to the participating banks for lending to small farmers, but the branch managers still had to be cajoled into doing so. The deposit-and-credit stories also reveal the potential for reversing the patterns of investment typical of regional and national banks, in which deposits from rural areas are siphoned off to urban areas for investment, or completely outside the region.

For more than ten years, Brazil's high rate of inflation, together with the Central Bank's provision of money-market-type instruments with high liquidity and reasonable real returns, had made it possible for banks to earn handsome returns on their short-term deposits—particularly sight deposits, which are not indexed and bear no interest.[3] With inflation running at roughly one percent a day by the late 1980s, for example, banks could earn slightly more than that by investing their sight deposits in one of the most popular of these instruments—the overnight"—or in lending for commercial credit with full indexing and at 30 percent interest per month. These opportunities, needless to say, created an environment in which banks became quite competitive in seeking out depositors.

In Pernambuco, the governor had chosen credit as his "signature activity," and his administration subsequently became known throughout the Northeast as having done the most for small-farmer credit. This took place at a time when the credit resources of the Bank-funded project were hardly moving. The finance for the credit, channeled through more than one program, came from three sources: (1) the above-mentioned increased sight deposits of BANDEPE, the state development bank;[4] (2) a new agricultural development fund, created by the governor out of the returns from BANDEPE's investment of the operating balances of all public agencies of the state (including the project unit) in the overnight market; and (3) funds from the community-participation component of PAPP partly diverted to credit for the special small-farmer interventions that were a result of Pernambuco's "reinvention" of the project.

At the same time that the overnight was generating an agricultural development fund for the state, all banks were competing in urban *and* rural areas for the lucrative sight deposits. BANDEPE's branches competed particularly in rural areas, given the governor's rural-credit initiative and the fact that the lower interest return on rural credit meant that sight deposits were the only profitable form of financing. As a result of this competition, BANDEPE won some of its new deposits away from other banks—mainly, the Bank of Brazil, which has a wide network of branches in rural Brazil; BANDEPE thereby came to have a larger number of branches and deposit volume in the state of Pernambuco than the Bank of Brazil, for the first time in history. Though the deposits won over from other banks did not represent a net increase in formal rural savings, the branch managers also worked hard to obtain *new* deposits—persuading firms, farmers, and other individuals who customarily held their cash at home or at the store to put it in the bank instead.

In order to persuade depositors to switch from other banks—or to keep cash at the bank instead of at home—BANDEPE branches had to show that they could offer better service to potential new depositors. In rural areas, one of the most valued services to small farmers was access to credit and respectful treatment. One form of this special treatment was to (1) offer loans to new rural borrowers without asking for the usual deposits the first time around, and (2) get them "hooked" thereby on BANDEPE gently suggesting upon subsequent loan requests that the borrower keep "some" cash in a sight account. Treating potential new borrowers well could also bring in new deposits from municipal governments, sometimes even the personal accounts of the mayors themselves, who were grateful for the "pro-development" role that the bank branch was playing in their municipality, and the increased business and economic activity that it was generating. Branch managers wanted to lend to small farmers more than usual, in sum, because it was good business for them, and their performance was rated on the profitability of their branch. This contrasts sharply with most agricultural-credit programs worldwide, including those of the Northeast projects, where branch managers customarily see small loans as a nuisance.

The desire to provide good service to small farmers in order to obtain their deposits is also operating among some of Brazil's agricultural cooperatives today. A recent law has allowed agricultural service coops to apply for depositor status; previously, they were not allowed to take deposits beyond requirements for forced savings. The Irecê coop, for example, has been vigorously lobbying for depositor status as a way of making membership in the coop more attractive and, at the same time, of increasing the amount of capital available to it for lending to its membership—mainly small and medium farmers. In its lobbying effort, the coop had to compete with the local branch of the Bank of Brazil—which was not happy about the prospect of the coop's obtaining depositor status, for fear of losing some of its own deposits.

Another important aspect of the Pernambuco deposit-mobilization story is that it took place within a state development banking system, rather than the longer-established, more reputable, and much larger Bank of Brazil—one of the largest agricultural banks in the world. The first generation of Northeast projects had actually bypassed the state development banks because of their shorter and more checkered histories, using instead the Bank of Brazil (and the regionwide Bank of the Northeast) as the financial agents for the credit component. Though the state development banks could not compare to the Bank of Brazil on longevity and soundness, and were more vulnerable to political meddling by governors,[5] they also had to be more responsive to the developmental initiatives of a state government than would be a national institution like the Bank of Brazil. The "unresponsiveness" of the latter was frequently complained about by various state agricultural officials and Bank supervision officers. Mobilizing rural savings and investing them locally, in short, were more in character for a state development bank than a nationwide or regionwide bank. It was for all these reasons that many project managers, exasperated with the credit problems of the Northeast projects, looked beyond the projects and the banks of Brazil and the Northeast to the state banks for solutions—just as in Pernambuco.

State governments often used the state banks to bail out their deficit-ridden operations, and to distribute political patronage. But in these cases of rural deposit-mobilization, the presence of the Bank of Brazil and the Bank of the Northeast as competitors for deposits constituted a healthy check on state-bank performance. The state banks would not be able to compete deposits away from these more "serious" banks, that is, unless they showed potential depositors that they could provide services better, or at least as well. The Bank of Brazil's presence *was* important to the outcome of the BANDEPE story, then, but as a standard against which BANDEPE had to match up—rather than as a direct participant—and as a strong competitive presence.

The Pernambuco story also illustrates a new interest of state governments and banks in charging less subsidized interest rates for agricultural credit. For many years, the World Bank tried unsuccessfully to persuade the Brazilians against using high interest subsidies on agricultural credit; even in 1985 and 1986, when completing the agreements for the second generation of Northeast projects, the Bank gave in to a cumbersome subsidy arrangement for project credit whereby half the loan was forgiven and treated as a grant, and the rest was subject to full indexing. In Pernambuco, in contrast, the credit subsidy almost magically disappeared—though the program is too new, and the data on it too scanty, to make a final judgment. This kind of progress toward reducing the problem of highly subsidized interest rates in highly inflationary economies is striking—because (1) all levels of government resisted the reduction of agricultural credit subsidies so vigorously for so many years, and (2) state governments would seem to have *more* of a short-term political interest in subsidizing agricultural interest rates than the more distant central government. What drove the state's concern to charge a nearer-to-the-market interest rate for the credit, however, was its desire to preserve its new fund for agricultural credit. This would not be possible if the value of the funds generated by the overnight investments were allowed to be eroded by a negative real interest rate on lending.

The Central Bank's sharp retraction of credit lines and rediscounting facilities for agriculture in the early and mid-1980s also contributed to Pernambuco's perception of a need for the state to generate its *own* capital for agricultural credit. Before the retraction, subsidized Central Bank instruments had financed the lion's share (80 percent) of BANDEPE's rural credit, with sight deposits contributing only 20 percent. After the retraction, these percentages were reversed—with sight deposits now accounting for 80 percent. Thus fiscal and monetary austerity at the level of the central government, and the opportunity to mobilize capital *within* the state, both contributed to the change in attitudes about subsidized interest rates *and* to mobilizing resources for credit. Just as crucial to this outcome was the governor's desire to make small-farmer credit and productivity interventions a hallmark of his administration.

Finally, in comparing the "alternative" credit experiences of Pernambuco and other states to the credit component of the Northeast projects, the importance of short-term or operating credit in the state initiatives stands out. Short-term credit was eliminated from the second-generation projects in an attempt to focus the credit component more sharply on the productivity increases brought about by longer-maturing investments (as noted above). Though eminently understandable, the concentration on longer-term investment credit created some other problems or, at the least, reduced some important opportunities to mobilize credit finance and increase the productivity of small-farm agriculture:

- Smaller farmers, risk-averse and fearing the loss of their land to the bank, often preferred *not* to finance productivity-increasing investments out of bank loans but, rather, to hire themselves out as laborers to obtain the capital for such investments;[6] or they chose smaller investments that they felt safe financing out of short-term credit (several of Pernambuco's "special interventions" were actually designed to break productivity or marketing bottlenecks through credit-financed investments that could be paid off within a year, like animal traction);
- Banks did not lend investment credit to tenant farmers, or small farmers without clear title, because of collateral

requirements, whereas they could lend short to such farmers using crop liens for security;
- Small farmers were less resistant to full indexing on short-term loans than on longer, because of the compounding in the longer term of their anxiety that the prices received for their crop would not keep up with the index used to correct the loans;
- The short-term loans were more compatible with attempts to raise interest rates to positive real levels through schemes to denominate repayment in kind, which were proliferating in the various Northeast states outside the framework of the project, and in which implicit positive real interest rates were readily accepted by farmers at the same time they were refusing full indexing on half their PAPP loans.

In some ways, then, short-term credit may serve the interest of productivity improvement in small-farm agriculture better than longer-term credit. This is because short-term credit (1) facilitates the kinds of productivity-increasing investments that *small* farmers make, or the ways in which they prefer to finance them; (2) is more compatible with the risk aversion of small farmers, particularly in unstable and high-inflation agricultural economies; (3) is more compatible with attempts to raise interest rates to positive real levels; and (4) has a special political appeal because it reaches small and landless farmers broadly.

The final results of these various attempts by the Northeast states and regional institutions to solve the problems of credit finance are clearly still not in. Questions remain as to whether these initiatives are sustainable, what repayment rates will be, whether the "implicit" interest rates will have included strong subsidy elements, and what the cost of administering these programs is.[7] Regardless of these outcomes, however, the experience illustrates various incentives that can link small-farmer lending to rural savings and other sources of finance, and that can stimulate "better" interest rates:

- Strong financial incentives to branch managers to lend to small farmers (in the form of profits earned on sight deposits);
- A financial institution linked into development energies at state and local levels, and thereby able to draw on capital and other resources hitherto untapped;
- A forging of this link between credit and deposits in the more decentralized and developmentalist state banks in a way that also demanded good performance from them;
- a strong state-government policy initiative favoring small-farmer credit;
- New financing from a fund arising out of the investment of state cash balances in the overnight, and
- A financing incentive to charge real interest rates (the desire to preserve that new loan capital). Clearly, linking small-farmer lending to savings would not always have to take this particular form.[8]

Though the Bank itself financed the research that emphasized the importance of savings mobilization for the growth of rural financial institutions, the kinds of incentives listed above are largely absent in its agricultural and rural projects. This is partly because the Bank's concerns about agricultural credit, including in the Northeast projects, have focused almost exclusively on the problem of the interest-rate subsidy, perhaps to the exclusion of these other issues. Paying more attention to the deposit side, and in a way that linked it to the expansion of small-farmer credit, would seem to be at least as important—as well as contributing powerfully to a solution of the interest-rate problem *without* having to attack credit subsidies directly. Linking credit to deposit mobilization is also a more efficient way of getting branch managers to be more sympathetic to small-farmer lending—in contrast to the prevailing approach of requiring that they do so, making it costless to them with free capital, or "educating" them into it.

Notes

1. The community associations set up under the APCR component largely bypassed existing municipal government and went "directly to the people" —farmer associations, rural labor unions, and ad hoc municipio-level councils. Municipal government authorities, however, were often represented on the latter councils; sometimes, dynamic mayors went out of their way to link up to project resources, and sometimes project staff sought them out.

2. Ferguson (1990: 21—25) describes similarly salutary effects from the introduction of such a loan fund (US$150 million), with World Bank funding, to a municipio in the state of Paraná in southern Brazil (PRAM—Program of Municipal Action)—namely, (1) matching contributions at the local level, (2) economic rather than political criteria for choosing and designing municipal investments, and (3) improved and lower-cost performance by public agencies.

3. Most short-term depositors, of course, opted for the interest-bearing and indexed accounts—to name the most important, "renumerated accounts" (*contas remuneradas*), savings, and overnight. But these accounts did not provide full liquidity (30 days for savings, 24 hours for overnight), and/or required minimum balances (overnight and remunerated accounts). This left two categories of depositors for the unindexed, non-interest-bearing sight accounts: (1) small depositors who could not meet the minimum-balance and/or minimum-time-period requirements—important particularly in rural areas, and (2) larger depositors who kept a certain amount of their short-term deposits in sight accounts for liquidity and as a "price" for being treated as a good customer by the bank. (The latter was a looser version of the "compensating balances" required of borrowers by banks, particularly for loans from special credit lines with subsidized interest.) The unindexed non-interest-bearing sight deposits accounted for 20 percent of total deposits of Pernambuco's state development bank, BANDEPE, and for 80 percent of that bank's rural credit.

4. BANDEPE drew only on its sight deposits for all rural credit because (1) minimum turnover periods for rural credit were six months, making it unfeasible to lend out the shorter-term deposits held by the bank; and (2) the interest charged on rural credit was less than the interest paid by banks on the short-term interest-bearing deposits. Of BANDEPE's sight deposits, 25 percent were invested in rural credit; of its total rural-credit portfolio, 80 percent was financed out of sight deposits, and the rest came from Central-Bank rediscount facilities and special lines of credit. Rural credit accounted for 10

percent of BANDEPE's total portfolio, commercial credit 30 percent, industrial credit 10 percent, and infrastructure credit 50 percent. (For commercial loans, rates were fully-indexed and 5 percent a month; for industrial and infrastructure credit, fully indexed and 6.5 percent and 10.5 percent a *year*, financed out of special lines from the National Development Bank, and the Central Bank through the Caixa Economica Federal. The infrastructure loans were mainly to municipalities.

5. BANDEPE itself had to first be "cleaned up" by the governor's newly appointed president of the bank, before it was possible to carry out the governor's credit initiative.

6. Interviews and Rezende (1987: 19—20).

7. The Bank's Regional Office noted (November 1991) that "We regret that the report continues to present the Pernambuco credit story as a positive experience of trying to establish a self-sustaining new fund for financing investments by small farmers through short-term credit. While the impact of this innovative 'signature scheme of the Governor of Pernambuco' on agricultural production is not clear, it is known that the fund is inoperative because of the farmers' failure to repay, with the result of (a) larger losses than the transparent subsidy element implicit in the scheme proposed by the Bank, (b) a further postponement of introducing a viable system for financing investments to small farmers in a highly inflationary environment, and (c) a further nourishing of the farmers' perception that credit is synonymous with grants and subsidies. We are disappointed about these developments and disagree with the suggestion of the report that this was innovative and successful. We also strongly disagree with the claim that the credit system proposed under NRDP is 'a cumbersome subsidy arrangement'." This emphasizes the episodic nature of much project experience in the Northeast.

8. A recent study of the performance of 17 financial parastatals in Kenya found that those that accepted deposits performed best, for reasons similar to those discussed here (Grosh 1988).

4. The Question of Land

As well as to the two types of unexpected finance mobilization discussed in the last chapter, extra resources were frequently mobilized in the form of land:

- Project agencies sometimes elicited *donations* of land parcels from the municipios for settlement of landless farmers. In Piauí and Bahia, municipal governments donated their own land or even acquired it for donation when they saw this as a way of obtaining public investments from the project—a health clinic, a school, a water system, a collective irrigation project for landless farmers. In Bahia, mayors saw the collective irrigation projects as enhancing their political prestige, as helping to reduce the burden placed by their poor constituents on the municipal budget, or as simply bringing "development" to their municipio.
- Project agencies also elicited the donation of *private* lands for collective irrigation projects, by offering the donors in exchange a share of the water to be supplied by a new tubewell—the so-called "barter investments."
- The process of carrying out the land-regularization component of several of the projects, and of the Northeast land project, elicited the *"forced donation"* or "negotiated transfer" of lands—in this case, from large private landholders whose legal title was shaky, or who were seeking regularization of their title claims from the state or authorization to purchase large tracts of state land.

Most of the three types of land acquisition listed above took place at a more local level than typically occurs in agrarian-reform or land-settlement programs. Instead of agencies of the state or central government, the key actors were municipal governments, cooperatives, peasants organizing to seek out land, branch banks interested in facilitating such transfers, the regional office of a state agency. The decentralized nature of the process of search, negotiation, and acquisition of the land made land markets work better and, with a crucial assist from state agencies, more in the interests of small farmers than under the typical public land-transfer programs. What were the incentives that brought these parcels of land onto the market, and available for financed sale or donation to landless farmers? More generally, why were these acquisitions of land possible in times when land was considered to be increasingly scarce and too costly for acquisition by small farmers or by the state for transfer to them?

In addition to analyzing the three types of land mobilization listed above, this chapter closes with a discussion of two successful cooperative land-settlement schemes in Sergipe. This last category of land transfers conveys important lessons, like the other cases, about more effective ways of bringing about land redistribution *and* productive small-farm agriculture.

Municipal Land Donations

In contrast to the other cases of unexpected resource mobilization, the Bank played a direct role in eliciting land donations for the POLONORDESTE project in Piauí. There, the Bank insisted that the state come up with 30,000 hectares of land for redistribution *before* disbursement could start; a covenant in the project agreement stipulated further that no infrastructure could be built in a municipality unless land had been acquired for distribution in that municipality. To meet the 30,000 hectare goal, project staff and Bank appraisal offices offered a powerful incentive to municipal governments to contribute: they promised the mayors project-funded investments—a school, a health post, a road—if they came up with land. The municipalities donated their own lands, "persuaded" land out of the hands of owners of questionable title or of local dignitaries, or initiated processes challenging the title to a particular parcel when they knew the existing occupant's claim was not valid. As a result of this response, the project unit *exceeded* the

30,000-hectare requirement of the Bank by 20,000 hectares, and even met the goal before the stipulated time. Though the experience of Piauí and Maranhão with land programs cannot be extrapolated to other states with a longer history of settlement, certain similarities with the experience of other states were clear. In Bahia, for example, municipal land donations were elicited by the collective tubewell projects. The next section elaborates on that and other experiences.

Barter Investments

In the long-settled, semiarid Irecê region of Bahia, more recently, the Bank's role in stimulating land transfers, was indirect and not intentional. It refused to reimburse irrigation projects for small farmers with costs higher than US$2,000 per hectare.[1] This ceiling was difficult for the project agency to meet, which was estimating costs at roughly US$5,000 per hectare—partly because of the cost of acquiring the land.[2] But project staff were keenly committed to carrying out small tubewell and riverine irrigation projects for landless farmers, as was the Irecê coop. Both staffs therefore worked hard to come up with a cost-reducing approach. "Barter investments" and municipal land donations were the result, whereby the cost of irrigation was kept down by obtaining the land "for free" —donated by the municipality or by the smallish landowner who, in return, received part of the water for starting his own irrigated farming. The burden of acquiring the land was in this way shifted from the project's shoulders to others.

The private landowners and the municipalities contributed voluntarily because of the high value they placed on what they received from the tubewell projects. The landowners in particular received a permanent supply of irrigated water, and hence the first-time opportunity to undertake irrigated agriculture. They had not irrigated previously because (1) their cultivable acreage was not large enough to justify the investment in a tubewell; (2) in that irrigation was relatively recent in the region, having been adopted only by larger and more highly capitalized farmers, land values still reflected no more than their dryland crop potential; as a result, the value of a small or medium farm taken as collateral against a bank loan for a tubewell was not sufficient to guarantee the loan, (even though these same farmers were already receiving short- and medium-term credit), and banks therefore lent only to the more heavily capitalized farmers for irrigation; and (3) even if these better-off small and medium farmers had been able to get access to financing, they were hesitant to take on such a lumpy decision involving a large investment and a radical change in the way they produced.

The barter investments changed these circumstances by (1) making the tubewell investment a less lumpy one for the smaller landowner; (2) allowing the landowner to finance the investment in a way that was more compatible with his asset structure—namely, by ceding a parcel of his land; and (3) reducing the transactions costs and the risks of the investment to the ceding landowner, by transferring to the assisting agencies the function of arranging for the financing and conveying information about the new techniques. The barter investments, in sum, reduced the economic and institutional threshold for irrigation to the medium and small landowners who "bartered" their land in exchange for part of a tubewell and its water—not to mention making irrigated farming a possibility for landless farmers.

Local governments and mayors gained two distinct benefits in return for donating municipal land, or seeking out "good deals" for purchasing land parcels and donating it: (1) the political prestige of having a conspicuously verdant parcel of irrigated vegetable-growing land in their semiarid municipality, which represented "development," and (2) the relief that the project promised for the municipality's budget, as explained in the following.

Mayors in rural towns throughout the Northeast have been increasingly besieged with requests from their poor to help them pay for expenses like prescription medicines and round-trip bus tickets to São Paulo for the males in the family to seek temporary employment in the construction industry. Because of the personalistic style of these mayors, and because of the growing number of landless farmers who have moved to the edge of the municipal capitals while continuing to work in agriculture on a contract or occasional basis, the mayors felt politically obligated to attend to these pleas, and did so on an individual basis. Dealing with poverty this way sapped their time and their spare municipal budgets, many of them felt, without providing any lasting impact or relief.

Many of the Northeast mayors were looking for more lasting solutions to these drains on their budgets—such as (1) low-cost pharmacies run by the municipality, in some cases contracting out the growing of herbs for homeopathic medicines to groups of poor rural workers living at the edge of the city; (2) embarking on new approaches to trash collecting and recycling that would offer income-earning opportunities to these newly urban rural poor; (3) providing small plots of land to their poor for collective vegetable gardening—often for women and, in one case, for prostitutes; (4) identifying important informal-sector producers, providing them with space and technical assistance, and perhaps sponsoring trade fairs for them.

The mayors saw the collective vegetable projects irrigated by tubewell in this same light. Even if they had to use municipal funds to acquire land parcels, they saw the land donations as an improvement in the way they were *already* spending municipal funds: instead of having to shell out

municipal funds year in and year out for bus tickets to São Paulo to help their poor constituents earn income elsewhere, they reasoned, the expenditure on a collective plot for the same people promised to yield a self-sustaining result, which would also help develop the municipio itself. In general, the Northeast projects did not link up to these municipal initiatives, which usually operated outside the structure of the projects.

The reaction of the mayors and the landowners to the "second-best" solutions of the project agency indicates that these investments were quite economically desirable. As the barter-investment deals proceeded apace, for example, more and more better-off small landowners became interested, pressured the coop and the project agency for the "chance" to donate land for a project of this nature, and were willing to accept increasingly less favorable terms on the deal—offering more acreage in return for smaller percentage shares of the water. This in itself was an indication of the high economic value of the newly irrigated cropland to them, let alone to the landless farmers. The mayors, at first skeptical of the idea of donating municipal land for the tubewell projects, ended up clamoring for their "own" tubewell projects. Once they came up with the land, they complained that the coop and the project unit were not moving quickly enough. These demands pressured the project agencies into being more accountable, and not getting bogged down by delay. For local government to play this role of inducing performance from state government—as in the case of the Bahia road fund—did not require that local government itself be technically or administratively competent.

In Irecê, in sum, project agencies transformed the Bank's pressure to reduce the unit costs of irrigation into a "matching" incentive extended to local governments and local landowners to come up with land in exchange for tubewell projects. The matching incentive mobilized resources for project implementation that were not foreseen at appraisal, and did so in a way that produced better results in economic terms. The lesson of the story is not simply that "decentralization is better," but that it took place *in combination with* the strong presence of a more centralized government entity—the World Bank, a state government, a national development bank, or another nationwide institution. This more centralized agent provided strong matching incentives, technical assistance, and often a crucial counterweight on the side of the landless farmers that enabled them to negotiate access to income-generating assets with local elites. Further lessons from the barter investments and municipal land donations emerge in the following two sections.

Agrarian Reform without Tears

State land authorities sympathetic to project objectives sometimes took advantage of the shaky legal position of large claimants or holders of land as a way to extract exchanges from them. The authorities agreed to legalize or not challenge the title of these landholders, or to authorize their requests to buy state land, in exchange for "donations" of a parcel of the land in question for redistribution to landless tenants on the property or from elsewhere in the region. In a small way, these negotiated transfers of land represented an informal substitute for enforcing the law that authorized expropriation—given that the political and institutional environment made formal enforcement difficult. Though these transfers did not generate the amount of land for settlement that direct expropriation and large-scale regularization of title would have, they had the advantage of being fiscally costless—they did not involve purchase or expropriation. And they did not create the adversarial environment, the political tensions, and the opposition that direct enforcement of the land law would have.

In Northeast Brazil, as well as other parts of Brazil and Latin America, large landholders often operate in violation of the law. Either they do not pay the land tax, proof of which they need to obtain bank credit, or they claim to own land for which they do not have clear title, often evicting tenants with squatters' rights protected under Brazilian land legislation. On the one hand, this kind of violation of the law is widely tolerated because of the weak enforcement power of state institutions and the collusion between large land claimants and state officials. On the other hand, this state of affairs leaves landowners somewhat vulnerable if any change were to cause the state's enforcement power to become stronger and property rights to be enforced equally.

This latter type of change is exactly what happened in the mid-1980s in Northeast Brazil. It was caused by (1) the move toward democratization, which ended the political repression of groups organizing to defend the legal rights of tenants and squatters, and initiated a new era of politics in which electoral candidates who were sympathetic to small-farmer claims started winning elections; (2) a longer-evolving consensus among "modernizing" elites in the Northeast and elsewhere that a climate in which tax evasion and disrespect for land rights were tolerated was somehow connected to the "backwardness" of Northeast agriculture and therefore incompatible with agricultural modernization; and (3) longer-term investments by the World Bank and, to a lesser extent, the Inter-American Development Bank, in building up the capacity of national and state institutions involved in mapping land, assessing land values, and regularizing title.[3]

The institutional climate that set the stage for the negotiated land transfers, then, was a strange combination of (1) weak enforcement institutions and a tradition of disobeying the law, together with (2) a new capacity on the part of government, and a new drive, to enforce the law.

Though governments were not strong enough, nor the political climate supportive enough, to apply the protections of property rights and the obligations to pay taxes to all, the climate had changed enough so that the state could cajole lawbreakers into compliance by "extra-legal" means—namely, threatening to enforce the tax law, or legitimately questioning a claim to title or to buy a large tract of state land. The landowners or claimants were amenable to these "friendly" negotiations with state authorities not only because of their fear of expropriation, in other words, but also because of the legal questionability of a variety of their *own* actions.

Agrarian-reform programs have been widely criticized for the uncertainty that fears of expropriation create among landowners, and the damaging effect this can have on agricultural investment and modernization. While this assessment has often been correct, particularly when the uncertainty over expropriation extended over a long period of time, it assumes incorrectly that a large majority of landowners *would* be inclined to invest in increasing their production or productivity and are not doing so out of uncertainty—a point returned to below. More important, this critique of the land legislation represents an incomplete description of what causes landowners to fear. Though they may well fear that they will lose their land, to which they have a legal right, they also fear that they will lose their "right" to act illegally—namely, to evade the payment of land and other taxes, and to violate the rights of others who have legal claims to the land but are less powerful. They fear that obligations and rights under the property (and tax) law will be enforced, in other words, and not just that the "right to private property" will be disregarded. This kind of dual fear has characterized the countryside of Northeast Brazil and many other places in Latin America since the 1960s, when talk began not only of agrarian reform but of tax reform, regularization of land title, and agricultural modernization.

This kind of ambiguous political and legal environment has created opportunities that are less conspicuous than the more talked-of uncertainties. Some landowners, or buyers of large tracts of land, do things legally and have nothing to fear; others do not. Some state officials collude with the evasion of taxes and violation of the land law; others do not. At some moments and in some places, the political environment favors the colluders; at others, it supports the enforcers. The political environment in Brazil of the 1980s, plus the Bank's role in strengthening the Northeast's institutional capacity to carry out the land law, brought more support for the enforcers, and tipped the balance toward them in some states—particularly Maranhão, Ceará, and Bahia; in other states, and since 1987 in general, the balance has gone in the other direction. The mixed and variable nature of this environment creates opportunities for the kinds of negotiated transfers that occurred in association with the Northeast projects.

An important aspect of the negotiated land transfers is that they were *not* adversarial proceedings, in contrast to many expropriation programs. Indeed, they were often carried out by state authorities who were on friendly terms with the affected large land claimants. Many state officials who favored enforcement of the land law even preferred these kinds of negotiations to expropriation precisely because of their non-conflictual nature—the same reason for which many preferred purchase to expropriation. In this sense, the existence of a feared and conflictual alternative that was disliked by both parties—expropriation—was important to their being willing to enter into a non-conflictual negotiation. When state agencies preferred the land-transfer or purchase negotiations, moreover, it was also because they produced rapid and uncontested results—in sharp contrast to many expropriations.

The negotiated transfers—with their informality, their unpredictability, and their unique set of results from one case to the next—seem to be far from an orderly approach to land matters, let alone to the challenge of modernizing agriculture. At the least, however, it is important to understand that they represent a more accurate version of reality and its opportunities, than does the view that agriculture is being modernized in an orderly way, and that "disorder" and landowner reluctance to invest are solely the result of threats of expropriation.

Though donors like the Bank may not be able to plan for transfers of land like the ones described here, it is important to understand that the Bank's support for legality and the institutional infrastructure to carry it out has helped create a climate that is more conducive to this informal process of transfer. The Bank's institutional support to the land sector—through the state RD projects and the Northeast-wide land-tenure project—has made the states (and the central government) more technically capable of extending their regulatory reach and, in so doing, has empowered the enforcers.

Returning to the broader theme of this chapter, the negotiated transfers can also be seen as part of a series of actions in which the state unexpectedly mobilized additional resources in response to incentives emanating from the Northeast projects themselves. The negotiated transfers were innovative ways of acquiring land for small-farmer settlement without expending funds for land acquisition either through purchase or expropriation. As with the barter-investment schemes and the land donations by municipal governments, the project provided something that was not enough and that at the same time constituted a strong incentive for the project agencies and local actors to come up with the rest.

State officials and agency managers involved in the negotiated transfers or land purchases—as opposed to

expropriation—expressed a liking for them in private. They were non-conflictual, they could happen fast, and they wouldn't be undone later through long drawn-out challenges in the judicial system. These same people, however, were loath to praise them or talk about them in public. If they were in favor of land reform, as many of them were, they thought the negotiated transfers and purchases were pale versions of "the real thing" —an agrarian reform—and represented an abandonment of the chances for a more frontal and "just" assault on inequity of land tenure. In a sense, moreover, the negotiated transfers couldn't really be discussed as an approach to land problems because of their grounding in illegal behavior on the part of the landowners and a kind of "blackmailing" by state authorities informed about the illegalities. At the same time, however, there was something more "civilized" about these transactions than a full-scale agrarian reform. They represented, as several officials said, "an agrarian reform without tears."

Some earlier advocates of agrarian reform for Latin America are now making a new argument against its feasibility today. Beginning with the 1960s, they say, Latin American states have threatened agrarian reform from time to time, while at the same time heavily subsidizing large landholders to put their unutilized lands into production, and intensify their production methods. This combination of carrot and stick has succeeded, in the intervening 30 years, in pushing large landholders into modernizing agriculture and increasing output and exports. The modernization of agriculture, in turn, has removed one of the strongest economic arguments of that earlier period in support of agrarian reform—namely, that it would replace unproductive owners of the land with productive ones.[4]

Though the threat of agrarian reform coupled with the heavy subsidization of large-farm production has succeeded in pushing Brazilian agriculture to expand and modernize, the response of landowners has been mixed—especially in the Northeast, where there are still many tracts of non-producing, or extensively grazed land. In addition, the statistical evidence showing Northeast agriculture over the last 30 years as stagnant in terms of increases in yield is not really consistent with the assumption of the above-mentioned literature that agriculture has "already" modernized. The million hectares of mostly "unproductive" land expropriated or recovered (through cases of faulty title) over the last five years in non-frontier areas of Ceará, Maranhão, and Bahia, are testimony to this. The identification, titling, and settlement carried out in these areas was funded by the Northeast projects.

The coexistence of non-modernized landholdings in Northeast Brazil with the modern ones accounts for the strong sympathy for agrarian reform currently encountered among many Northeast technocrats. At the least, the non-modernized sector presents possibilities for the more "gentlemanly" kinds of negotiated transfers, donations, and purchases described in this section. The rest of the chapter describes a complementary realm of possibilities for land-transfer interventions.

Settling the Internal Frontier

In the late-1970s, the Coop Thirteen and the Estância cooperative of the Tabuleiros Sul region of Sergipe carried out successful land settlement schemes for landless farmers. Though these schemes shared certain characteristics with some of the state-sponsored schemes funded through the Northeast projects, they were quite different in important ways. In acquiring and distributing lands to their members in the years immediately preceding the Bank-funded project, the Sergipe cooperatives laid the groundwork for smallholder agriculture and institutions defending smallholder interests that contributed to the project's successful functioning in the subsequent period. And they were important local actors in project implementation.

The land programs of the Sergipe coops were driven partly by the importance of a particular cash crop in making production by the new settlers viable—first tobacco, then oranges, as discussed below. In addition, the public sector played a quite different role than it had in the Bank-funded projects and other land settlement programs, including the highly-praised land-purchase scheme of Piauí. In contrast to many of these schemes, the land recipients (and the coops) played an important role in identifying the parcels to be acquired for redistribution, and in negotiating the terms of the deal with the seller. (This also happened with some of the collective irrigation plots in Bahia, as discussed above.) A branch manager of the Bank of Brazil with a developmental interest in the region financed the transactions and, together with the state department of agriculture, provided technical assistance to the coop and the new landowners. The willingness of the state government and the Bank of Brazil to finance and provide technical assistance for the venture was crucial to its being able to take place.

The central role of the prospective buyers and the cooperative in locating the land and negotiating the transactions kept the state at arm's length from the seller. This was important because of the possibilities for collusion inherent in purchase programs—namely, that state officials collude with the landowner in setting a price for the land that is higher than its value, or in acquiring land that is not really desirable for farming—a critique made by several observers of the Bank-funded purchase program in Piauí.[5] Staff of the state department of agriculture in Sergipe, in fact, praised the cooperative land-purchase scheme for the very "protection" it provided them from their own vulnerability to pressure by powerful landowners and their politician

friends. "When land sellers told us to increase the price," they said, "we just shrugged our shoulders and told them to go talk to the coop—the deal was out of our hands."

Another distinction between the land schemes of the cooperatives and those of the Northeast projects was that land acquisition and distribution was a way for the cooperatives to build their membership. In order to obtain land, one had to join the coop, and this promise attracted landless farmers in the area to join. The membership concern put the coops under a self-induced pressure to perform—carrying through with the promised land transfers, the parceling, and the opening of access roads in good time. A large membership, in turn, helped coops to gain various services and subsidies from the state, which liked to use coops as conduits for public support to the smaller-farm sector.

This same kind of self-induced pressure to increase coop membership and "deliver" to it was also important in spurring the performance of the Irecê cooperative in Bahia. That cooperative aggressively sought out the barter-investment deals and the municipal land donations discussed above as a way of increasing the number of collective irrigation plots it could sponsor in the region and, hence, the number of new members. Like the Sergipe coops, moreover, the Irecê coop was better able to play this role because it was geographically and socially closer than a state agency to local politicians, landowners, and local land markets.

The lesson of the experience with the Sergipe and Irecê coops is not that cooperatives should replace the state in land settlement or other programs, or that nongovernment organizations do better than government at serving the poor. After years of support from the Brazilian state for cooperatives, after all, only a few cooperatives in Northeast Brazil became as strong as Coop Thirteen and the Irecê coop, and important actors in the development of their region. Though the Irecê and Sergipe coops were "nongovernment organizations" with local roots, moreover, their origins lay equally in the efforts of the Brazilian state over the past 40 years to extend its reach to rural areas. Central and state governments used cooperatives to create ties of political loyalty with rural elites by channeling development subsidies through them—as the founders of the Irecê coop themselves said in telling the story of their beginnings in the early 1960s. The coop successes at doing "better than the state" in land settlement, then, represent a more complex phenomenon than nongovernment versus government, or local versus central. Similarly, the local developmentalism driving the episodes of good performance of these coops was not unique to coops. It took other forms in the other successful cases studied here—a branch bank, a municipal government, a rural labor union, or even the local office of a public agency run by "locals."

The Sergipe coops did well with land settlement partly because they were operating slightly ahead of a dynamic agricultural "frontier" inside a state that had already been settled since the 19th century. This is quite different from the "genuine" Brazilian frontier at the western edge of the country's settlement. Since the early 1980s, Brazilian economists have pronounced the era of Brazil's frontier "closed," except for some areas in the south of Piauí and the west of Maranhão and Bahia. With this closing of the frontier, skepticism has increased about the possibility for reducing land-tenure inequities in Brazil (as well as in other Latin American countries) through land-settlement programs. Planners usually consider such programs possible only in remote or lightly settled areas where land is "still cheap," where productive agriculture will not be displaced or threatened, and where vast spaces seem to promise efficiency in the settling and servicing of large numbers of people. This was the basis of the Furtado plan for Northeast development in the 1960s, as adopted by the Northeast regional development authority, SUDENE (Furtado 1989): the more settled eastern and coastal parts of the Northeast, like Sergipe, were to be the site of an industrialization program, while the problems of unequal land distribution were to be taken care of with colonization projects located in "unoccupied" spaces on the frontier-like western edge of the Northeast. In the 1970s, the Bank financed one of the few projects of this plan to get off the ground—the Alto Turí project in western Maranhão.

The desirability of the "unoccupied" regions for the cheapness and availability of their lands ultimately contributed to the disappointing economic performance of many settlement efforts carried out there—the distance from markets, the lack of social and production services, the consequent unprofitability of intensive agriculture. (These features characterize some of the settlements, though not a majority, supported through the Northeast projects.) Investing in agriculture and land transfer in the more developed regions of the Northeast, obviously, would have remedied these problems. This, after all, was one of the justifications for the Northeast rural development projects—to be located in areas of *existing* market potential and concentrations of small farmers. But concerns about land prices in the more settled regions made project planners skeptical about these regions as sites for land-transfer actions—as distinct from the provision of agricultural services and productivity-enhancing investments. The cases of the Sergipe coops, and others discussed below, suggest that the land markets of some of these more settled regions display some of the openness thought to exist only on the "genuine" frontiers.

Oranges, Tomatoes, and Other Vegetables

Orange cultivation expanded rapidly in Sergipe in the 1960s and 1970s, replacing extensive low-input livestock grazing in some parts of the region—an unusual reversal of the more typical sequence in Northeast Brazil, in which

pasture replaced crops.[6] Farm-to-market roads and other infrastructure had not yet been built, so the land market was still "quiet" ; land values had not yet risen and landowners were not yet anxious to keep their lands in anticipation of an orange boom. Expectations about the region's agriculture at that time were actually somewhat mixed, since the main crop of the region was tobacco, not oranges. Processed rustically into "rope tobacco" by growers themselves, tobacco did not need roads and well-developed markets to the extent that the perishable oranges did. Starting in the late 1970s, however, the consumer market for rope tobacco started to decline because of the growing urbanization of the population, the increasing penetration of the market by mass-produced cigarettes, and a government health campaign against smoking, which singled out the cigarettes hand-rolled from rope tobacco as more dangerous. Given all these circumstances, the Sergipe coops could acquire land at reasonable prices *before* road-building and other supportive state interventions extended the orange frontier. The coops themselves sponsored the building of the roads, but only after the acquisition and distribution of land to small farmers had been assured.

The Irecê coop's collective irrigation projects in Bahia, and their acquisitions of land through barter investments and municipal land donations, represent a similar move slightly ahead of a "frontier" —in this case, an irrigation frontier. Like Sergipe, Irecê had been settled for more than a century and was anything but a "frontier area" in the traditional sense. A semiarid region afflicted with periodic drought, it nevertheless had good soils and had been a long-time producer of black beans, castor bean and, to a lesser extent, livestock. In the 1970s, a few large commercial farms introduced tubewell irrigation for vegetable and fruit growing; but irrigation had not spread widely because of the dominance of small and medium farms in the region, their difficulty in getting access to investment financing, and the absence of state interest in facilitating irrigation for small and medium farmers. The Irecê coop, with its imaginative approach to acquiring land for tubewells under the PAPP project, succeeded in extending the irrigation frontier to these small and medium farmers, not to mention the landless farmers. As in the Sergipe case, land prices did not yet reflect the increased values that the successful expansion of irrigated farming could bring, based as they were on the dryland production value of the land.

In both cases, the coop "extended" the frontier, with support from the state, in a way that (1) intensified agriculture, in contrast to the kinds of extensive agriculture practiced on most frontiers in Brazil and other parts of Latin America; and (2) secured a place for small farmers on this frontier with a high-value crop. Crucial to this strategy, though not anticipated as such by its executors, was the primary emphasis on securing land for small farmers *before* the state provided infrastructure and subsidies for this activity—that is, before land values were driven up.[7]

The "internal frontiers," in sum, shared with traditional frontiers a certain openness and fluidity in the land market, which was crucial to the state's securing land for small farmers, or intermediating its purchase by them. At the same time, they were just the opposite of traditional frontiers. First, they were inside regions that had been long-settled; rural population densities were 25 per km2 in Tabuleiros Sul, 18 in Ibiapaba, and 15 in Irecê—in comparison to roughly 7 in the three states with significant frontiers—Bahia (8), Piauí (5), and Maranhão (9) (Table 1.4). Second, because the internal frontiers were in settled regions, they provided unusual opportunities to intensify agriculture—opportunities that did not exist on traditional frontiers (distance to markets, lack of infrastructure) *or* in the non-frontier parts of already-settled regions (high land values, locked-in inequitable tenure patterns). Third, the crops involved were particularly compatible with the labor and management intensity of small farming, unlike the crops that characterized the expansion of the "real" Brazilian frontier particularly, soy bean and beef cattle. Fourth, and as explained momentarily, changes in markets and technology brought about by urbanization and development itself had turned these parts of the settled regions into "frontiers," particularly for small farmers. This last point conflicts with the prevailing view that the increase in land values accompanying development and intensification of land use makes land-transfer actions *less* possible. Sergipe's orange frontier is a good example.

The major expansion of orange cultivation in Tabuleiros Sul took place in the 1970s and 1980s only after urban consumer markets for fresh produce had developed in the Northeast, along with marketing systems for these perishable crops. Fruits and vegetables did not have a ready market in Northeast Brazil 15 to 20 years earlier, when urban populations were much smaller. Also, the Brazilian government dedicated substantial resources and attention to the development of wholesale and retail produce centers in the Northeast cities during the 1970s and 1980s. Though some aspects of this intervention have come under criticism, even the critics acknowledge that the Northeast markets for fruits and vegetables have grown markedly in the last 20 years, and that this growth is one of the most impressive achievements of the Northeast's agricultural sector. Sergipe's orange expansion would not have been profitable without these larger developments.

In the 1970s, Brazil also started exporting frozen orange juice made from São Paulo orange groves, and is now the world's largest exporter. That market became even more attractive in the early 1980s, after the hailstorms in the Florida orange groves reduced production there. Sergipe benefitted as a latecomer—and a small one—from this prior

pathbreaking of São Paulo in opening up the export market. More than half of Sergipan orange production is now processed into frozen orange juice for export by two plants installed in the region in the early 1980s. Until that time, Sergipan orange expansion relied exclusively on the market for eating oranges in the urban Northeast. Now, as a small supplier in a large export market for frozen orange juice, Sergipe faces a highly elastic demand for its oranges.

The rapidly growing Northeast urban market for vegetables also made possible the opening of the "irrigation frontier" in the Irecê region of Bahia, as discussed above Similarly, the rapid expansion of small-farm tomato production in the Ibiapaba highlands of Ceará, before and during the POLONORDESTE project of that name, would not have been possible without the growing urban markets for tomato consumption in the Northeastern cities of São Luis, Teresina, and Fortaleza, to which Ibiapaba became a major supplier in the 1980s.[8] The project's building of farm-to-market roads in Ibiapaba—and investment in a wholesale market facility there—also represented the opening of an internal frontier: the Ibiapaba highlands had been settled for a long time prior to that, and tomato cultivation had already started to expand in the 1960s. Starting in the late 1970s, the road investment led to a marked expansion of this highly perishable crop, and was key to the project's economic success.

Tying Irrigation and Roads to the Land

In contrast to the land schemes of the Sergipe coops, the Ibiapaba project did not link its road-building to the establishment or protection of a small-farm landholding structure—though the project's agricultural services were targeted on small farmers. Hence evaluations by both the Bank and the project unit consistently reported that the opening of roads by the project and the expansion of tomato cultivation had led to a *worsening* in the size distribution of land, as larger farmers acted on the new market opportunities by buying out smaller owners or evicting tenants.[9] The fruit-and-vegetable frontier could become accessible to small farmers in a significant way, then, only through the kind of institutional intervention that Sergipe and Irecê brought: the provision of infrastructure in the form of farm-to-market roads or small irrigation, slightly ahead of an expanding internal frontier but tied closely to the securing of land and credit for small farmers.

Like many successes, the experience of the Sergipe coops with land settlement tends to be viewed as an "exception" —small state, non-arid land, dynamic cash crop, competent public sector—and therefore with no lessons to offer for other places. But to the extent that this land-settlement experience shares features in common with the other more promising land experiences discussed here, it does have some lessons to offer. More specifically, (1) land recipients participated in the selection of the land to be acquired and the negotiation of its price, and in its demarcation and distribution; (2) local institutions like branch offices of state or federal institutions, coops, municipal governments, or rural labor unions played crucial roles as "brokers" for small farmers in these activities; (3) land was available for transfer only in "patches," rather than the more convenient large blocks of typical land-transfer programs—together with the fact that the Brazilian land legislation did not allow expropriation of parcels less than 500 hectares; and (4) plot parcels were often smaller than the "family farm" characteristic of traditional land-transfer programs.

The experiences described in this chapter, in sum, went several steps beyond more typical agrarian-reform programs in decentralizing the decisionmaking about land to a place where reasonably-priced land was elicited, better deals were made, the fiscal and administrative burden on the state was reduced, and more appropriate technical choices occurred. Project planners have not paid due attention to these possibilities because they involve approaches that look piecemeal to those with grander visions—for the same reasons, that is, that private irrigation tends to be ignored by agencies involved in public irrigation, and road improvements ignored by agencies engaged in road building.

In certain ways, many Northeast municipios are particularly poised to act on the internal frontiers—perhaps even more so than their state and national counterparts. In particular, the mayors of municipios with important rural hinterlands are becoming increasingly preoccupied with the poverty of the rural poor living within their borders, partly because it has become an increasing drain on municipal budgets (see also above). Some of the more progressive and developmental mayors are looking toward cultivation of vegetables as a more self-sustaining approach to employing their poor, feeding them, and raising their incomes enough to reduce their burden on the municipal budget. The collective gardening projects sponsored by these municipios are a sign of this new concern and its "productive" form, as are the donations of land by municipios in Irecê for collective irrigation plots. Many municipalities in the more developed parts of Brazil are doing the same. [10]

The frequent appearance of small and private irrigation in so many of the cases identified here and elsewhere in this review requires some comment. Shallow tubewell or riverine irrigation at short distances was a feature of two of the three cases discussed in this chapter (Irecê, Ibiapaba), and of three others mentioned elsewhere—the PROMOVALE project in Ceará (see Chapter 2), the Agreste Setentrional in Pernambuco (see Chapter 5), and the BNDES project in Rio Grande do Sul (see Chapter 5). This kind of irrigation has been generally ignored by water agencies because it is piecemeal, low-tech, and low status (see Chapter 2) . In the

Northeast in particular, the public sector has taken a more public, centralized, and "large" approach to irrigation than in the rest of Brazil—because of (1) the drought problem, to which large irrigation works were long considered to be the best response, and (2) the dominance of "irrigation space" in the Northeast public sector by two large regional agencies wedded, until recently, to the costly and centralized approach to irrigation. The agencies responsible for making irrigation work in the above-noted cases, in contrast, operated at the *state* level and/or were not specialized in irrigation—project-coordinating units, agricultural extension services, banks. What made these projects work, moreover, had less to do with irrigation expertise—most of these areas already had some tradition of small and decentralized riverine irrigation—than with making it possible for small farmers to obtain (1) credit for the purchase of the equipment, (2) cooperation from the electric utility in estimating the cost of the connection, supplying the transformers, and/or actually carrying out the connection, and (3) assistance in forging water-user agreements, sorting out land conflicts, acquiring parcels of land, or organizing for group production.

Recently, the Brazilian government and the Bank carried out a comprehensive review of the economics of irrigation investment in Brazil (World Bank 6/22/89). Generally cautious—particularly about irrigation in the Northeast—the review carefully specified the conditions under which irrigation would be economic. Three of these conditions fit exactly the kind of irrigation and agriculture practiced in the cases reviewed here. Namely, (1) *private* irrigation with short conveyance distances and low pumping lifts, which is a "fraction" of the cost of public schemes (US$600 to US$3,500 per hectare versus US$6,500 for public schemes) (World Bank 6/22/89, para. 9) (2) production of high-value fruit-and-vegetable crops versus low-value food-staples like wheat and corn (World Bank 6/22/89, para. 12[a,b]); and (3) an improvement of the expected returns resulting from the size, location, and organization of markets for these crops (World Bank 6/22/89, para. 12[b]) . Certain kinds of irrigation and approaches to it, in other words, seem quite desirable for small-farmer-oriented development programs.

Recent research, as noted above, has emphasized the importance of rural infrastructure in bringing about rural growth and reducing inequality. Many now believe, therefore, that the targeted rural development projects made a mistake by side-lining infrastructure in favor of agricultural production services. The discussion in this section *seems* to bear out this conclusion. But there is one major caveat: it was not the provision of irrigation or roads in themselves that facilitated a poverty-reducing style of agricultural growth but, rather, the strict linking of these investments to providing small farmers with secure access to the land, and in areas where more intensive production was profitable.

Notes

1. A Bank-sponsored review of per-hectare investment costs for various types of irrigation in Brazil came up with US$1,990 a hectare for the "Northeast model," which seems most representative of these Irecê-type investments (World Bank 6/22/89).
2. Though the state was carrying out a vigorous agrarian reform at this time, expropriation was not possible for this type of land acquisition because the law prohibited expropriation of parcels less than 500 hectares, and Irecê was already a region of principally small and medium holdings, and hence less affected by the reform.
3. The following works analyze some of these changes: Falcão Neto (1985), Guimarães Neto (1988), Lavaredo and Pereira de Sá (1986), Muda Nordeste (1985), Sales (1988), Santos (1988), and Stepan (1988).
4. For example, de Janvry (1989). Carter and Mesbah (1990) also summarize the literature around this argument; see also Binswanger and Elgin (1988). For analyses of the Brazilian case, see Carter and Walker (1989), and Thiesenhusen and Melmed-Sanjak (1990).
5. The same possibility exists under expropriation programs too, where state officials and expropriated landowners can collude in setting the price at which expropriated land will e compensated, and the terms of the payment. Accusations of such collusion were made about the expropriation *and* the purchase programs, usually depending on which of these alternatives one was against.
6. Wanderley (1988) provides a comprehensive account of this geographic and economic history.
7. A history of *private* colonization projects in southern Brazil in the 1930s and 1940s came to a similar conclusion with respect to one of the traits that characterized the more successful projects: they were located on lands that, on the one hand, were undeveloped and, on the other, were near the expanding coffee frontier. They were also far enough away from existing settlement that the projects did not arouse the interest or concern (for losing labor) of the region's large coffee planters (Katzman 1978).
8. Finan (1981, 1990), and CEASA-CE (1979). Ibiapaba produces tomatoes only for eating and not for processing.
9. CEPA-CE (1982, 1984, 1987b), FAO/CP (1988).
10. Ferguson (1990: 7ff) provides an other example of a concern about rural poverty, and efforts to do something about it, on the part of a dynamic municipality in Paraná in the developed southern region of Brazil.

5. *Tales of Dissemination in Agriculture*

Evaluators of the Northeast projects have been disappointed with the performance of agriculture. When increases in output occurred, they were said to result "only" from increases in acreage planted rather than from increases in yield—a critique that was also made of rural development projects worldwide.[1] The state agencies in charge of agricultural extension and research frequently received poor grades in supervision and evaluation reports, and the criticisms of their performance pointed again and again to the same problems. Research was "too academic," not concerned about small-farm crops and practices, not sufficiently engaged in field testing and adaptation of its findings, and not interested in collaborating with the extension service in the interests of dissemination. Extension agents, in turn, had "nothing to extend" and inadequate experience and in-service training, were in their offices more than in the field, and were chronically short of what they needed to do extension—vehicles, funds for fuel and vehicle maintenance, and per-diems to travel. The exceptions to this picture are the subject of this chapter.

These complaints are familiar ones, and certainly not unique to the Northeast Brazilian case. The Northeast projects devoted considerable thought and resources to remedying these problems, and building up the capacity of these institutions. In particular, research agencies were given explicit targets in terms of field-oriented behavior—number of demonstration plots, number of field trials, etc. Extension and research were admonished frequently about their failure to develop a collaborative work style, based on the assumption that adoption and dissemination could not happen without collaboration. Despite these efforts and the fact that dissatisfaction with the performance of extension and research did not abate, several exceptions stand out—in terms of widespread increases in productivity resulting from successful dissemination of research findings.[2]

The exceptions reviewed here did not fit the model of agricultural innovation and diffusion implicit in the above critiques and concerns. (1) Extension was *not* necessarily the agency that carried out, or caused the dissemination to occur; (2) research was *not* necessarily the institution that carried out the field trials and the adaptation that facilitated widespread adoption; (3) some of the successful disseminations were carried out by institutions that were getting consistently poor grades on their overall performance in Bank supervision reports and other evaluations; (4) the forward movement that carried research from basic findings to field testing, adaptation, and dissemination was not necessarily the result of collaboration between research and extension; when it was, the collaboration occurred only around that particular episode, and was not the working style of those two agencies; and (5) two widely disseminated mechanical innovations discussed below—the cistern and the animal traction implements—turned out to be unsuitable for adoption when first released by the research agency; it was only the unforeseen adaptive work that the "user" agencies had to do that made these innovations adoptable.

What *did* bring about these dissemination successes, if it wasn't good research and extension agencies doing what they were supposed to do? If the same agencies that didn't collaborate, didn't field test, and didn't have anything "to extend" could suddenly change their character, this suggests that part of the problem had to do with something outside the agencies rather than with their inherent capacity. Common to all the exceptions, as the cases presented below demonstrate, was a quite different set of conditions, which was strikingly parallel to the kinds of demands and incentives that surrounded the better-performing episodes described above in roads, water, irrigation, and land settlement. The cases illustrating these points fall into two categories—(1) those involving campaigns against crop disease and pests, and (2) those that did not.

Disease, Pests, and Other Scourges

Several of the successes in the dissemination of improved varieties resulted from an attempt to control disease or pests in existing plantings. During these episodes, the way extension and research customarily operated changed radically. Three cases in particular stand out—oranges in Sergipe, bananas in Paraíba, and cotton in several of the Northeast states.

In all three cases, the successfully-disseminated new varieties were preferable on grounds other than their resistance to disease, but had not been promoted or adopted previously. The new orange variety ("pear" orange) was not only disease-resistant, but was a juice variety ("Bahia" orange), as opposed to the eating variety that was the only one cultivated previously; this facilitated the establishment of a juice-processing industry in the region which, in turn, ended up exporting frozen orange juice to Europe and the United States. The new cotton variety[3] was desirable not only for its resistance to the boll weevil, but for the switch it required from perennial to annual cotton; the perennial plant had been associated with a tradition of low-productivity joint production with extensive livestock (which fed on the leavings of the cotton tree after the harvest) and sharecropper production of interplanted annual subsistence crops. Prior to the campaigns against disease or pests, the productivity of these crops had been stagnant or even declining; producers were in a kind of low-productivity equilibrium, with state governments not able or worried enough to do anything about it.

The successful disseminations resulting from the disease and pest campaigns all achieved their results in a relatively short period of time. In Sergipe, almost all orange growers switched from the disease-prone eating variety to the disease-resistant juice variety within four to five years—a rapid transformation for a perennial crop. In Paraíba, banana producers shifted completely to the disease-resistant variety within three to four years. Cotton production, after falling drastically in the mid-1980s, regained its earlier production levels within four or five years. All three cases, in addition, involved cash crops that were *already* being produced by small farmers, but not exclusively by them. The success of Sergipe in disseminating the new orange variety, for example, did not work in Paraíba, even though the agro-climatic environment was quite similar, because farmers were not already producing oranges there.

The agricultural agencies of the state governments all played a strong role in mounting the disease- or pest-combating campaigns. Their efforts were characterized by a remarkable level of coordination and dynamism—in contrast to the way these agencies typically behaved. More striking, these interventions involved an unusual combination of high subsidy *and* high discipline, which forced the adoption of the new variety. First, farmers received credit at negative real interest rates—though no more negative than the prevailing rates on official agricultural credit—to buy certified seeds, rootstock, or seedlings, and fertilizer and pesticide applicators, and to eradicate diseased plants and put in new ones. Second, the banks, the extension service, and the research agency carefully monitored the uses to which the credit could be put. Borrowers had to show certificates proving they had purchased the approved variety, and applied the requisite fertilizer; or they received credit only in kind, in the form of the recommended inputs. Third, in several cases, the state held monopoly control over inputs. In Sergipe, for example, the agricultural experiment station controlled the quality of seedlings available in the state's private nurseries because (1) it was the sole source of the rootstock used to make the graft (from a lemon tree), and (2) the station itself had been responsible for the development of a private nursery sector in the state, previously non-existent, in that it had selected and trained 60 small farmers to produce the certified seedlings. Fourth, the subsidy had automatic "sunset" provisions—though not explicit—to be terminated when the disease problem was overcome.

The way agricultural credit was subsidized in these stories contrasts sharply with the way it has typically been subsidized in Brazil and many other countries—namely, indefinitely and across the board. In the above stories, subsidized credit (1) focused on a campaign to solve a problem with a particular crop, (2) and over a fixed time period; (3) forced changes in cultivation practices and input use that would be automatically self-sustaining, once the subsidy and strong control were dropped in a later period; and (4) came with a strong controlling presence from the state's agricultural agencies—a kind of carrot-and-stick approach. The more typical agricultural-credit subsidies tended to be all carrot and no stick.[4]

The disease and pest campaigns did not involve crops produced exclusively by small farmers, but all made special efforts to reach them.[5] This was partly a result of a generally increasing awareness of small-farmer issues in the Northeast agricultural agencies, but it also had to do with the negative externalities of disease: if small farmers were not included in the public assistance efforts, infestation in their crops would ultimately affect those of the larger farmers. The attempts to include small farmers in the productivity-increasing campaigns also recognized the different economics of small-farm operations—higher unit prices for purchase of small volumes (relevant to the purchase of pesticides and medicines) and lack of information about equipment and its use. In Pernambuco, for example, the state organized small "brigades" to distribute a weevil-fighting package to small farmers, training one farmer (who was paid for the training) in the proper use of the pesticide

applicator. In Sergipe, the state worked partly through the two cooperatives of small orange-growing farmers, also using "brigades." In all these cases, the state agencies made special efforts with small farmers because, as they said, they had to do something more aggressive than simply let the word out through the extension system.

Finally, the public figures and agency managers who led the disease campaigns had a strong sense of mission because the problem threatened to undermine the economy of certain microregions, regions, or even whole states. The Boquim experiment station, which spearheaded the dissemination of the disease-resistant orange variety, wanted Sergipe to "beat" its large neighbor state Bahia in orange production—from whence the improved orange variety had originally come. The small group of agricultural researchers who managed the station referred to themselves as "sons of Boguim" —proud of their region, wanting it to progress, taking responsible positions in the local orange-producer association and in town government, as well as wanting to "show up the Bahians" —whom they considered to be "lazier" than Sergipans were. Adding to this sense of mission around disease eradication were the two small-farmer cooperatives that had been formed earlier. Though these small growers had been producing tobacco when the cooperatives were formed, they had been moving into oranges as the market for tobacco declined, and hence were eager to act as agents of dissemination for the new variety. The experiment station, in turn, saw its interest in dissemination served by working hand in hand with the cooperatives.

The sense of strong regional identification and a dramatic developmental mission drew the Boquim station out of its experimental plots and into the fields of growers—in a way that was unusual for agricultural researchers. Similarly, though on a wider scale, it was the concern for the fate of "Northeast cotton" that provided drama to the weevil campaign, since cotton production was an important part of the agricultural economy of several Northeast states.[6] *Not* doing anything about the boll weevil or orange disease, in other words, involved high costs to the regional economy—or, it meant forgoing attractive market opportunities for agricultural growth. Much of the work of agricultural research and extension agencies—multi-faceted and dispersed—is not blessed with the driving force of this kind of strong regional identification and high-level worry about a particular crop.

How are these disease-driven stories of increased agricultural productivity relevant to the broader palette of agricultural research and extension activities, with their more ongoing nature? Clearly, one can't wait for a disease of epidemic proportions before trying to improve agricultural productivity. Even if one did, what would keep agricultural extension going *between* these epidemic infestations and their energizing campaigns? What are the lessons of the disease-driven stories, in short, for normal times?

The Transformation of Work

The disease campaigns transformed the system of incentives and penalties under which agricultural agencies typically work. In that the characteristics of this transformed work style and work environment were quite similar to those of the better-performing episodes described previously, the disease episodes do provide lessons that do not "require" disease for their implementation.

Extension and research typically work on several fronts at once—many crops, many inputs, many special programs (including the Northeast projects), and many different specializations. Given all this choice between crops and activities, these agencies pay more attention to one crop or problem than another at any particular moment and depending on the circumstances of that moment. Often, they do not have clear and confident proposals about what to do about "low productivity," nor do they have firm control over the supply of inputs that is usually required to get a "modernizing" technology to be adopted widely. Their performance, moreover, is customarily judged by their funders in terms of inputs rather than outputs—number of farmers visited, of farmers attending courses, of field trials, of demonstration plots, rather than rates of adoption of new varieties, observed yield increases, etc. The agencies suffer no particular penalties for failure to perform in these latter areas, nor is their behavior driven in any way by fear of the consequences of poor performance—as it was in the case of the Bahian land agencies, or the Sergipe rural water agency.

Disease campaigns change all this. The epidemic dictates the crop, the problem, the region, the package of inputs and practices that *have* to be applied and that are dependent on the cooperation of the input-supply network—temporarily narrowing down the work agenda to one crop and to a specific problem with that crop, and assuring adequate funding for recurrent expenditures. It stipulates an activity with a clear beginning and an end—eradication or substitution of the diseased plants with the improved ones. And the end can be reached, usually, within a period of time shorter than the five-to-eight-year life span of the typical rural development project. The anti-disease package also takes a more concrete form—seeds, rootstock, or seedlings, and fertilizer, pesticide, and pesticide applicators—than the changes in cultivation practices that often dominate the recommendations made by extension agencies to small farmers.

The disease problem itself is more clearly measurable than the problems research and extension usually work on, and the "end" is marked by a highly measurable standard that involves outputs and not inputs—number of diseased trees eradicated, number of acres planted in the new vari-

ety, reduced incidence of the pest in the region, increases in output of that crop. Conversely, failure to perform is measurable and conspicuous—continued high levels of pest incidence and continued declines in production. The costs of bad performance are also clear, as is their incidence. Growers suffer losses of income and, just as important for mobilizing state action, the state or the region suffers from the decline of an important economic activity—declining tax revenues, declining employment and its attendant social problems, and declines in the incomes of an important constituency. Civic leaders fear the loss of a sense of regional self in places where economic, social, and cultural traditions are defined by long association with a particular crop—like cotton in the Northeast states. Regions that find themselves on a roll with a relatively new crop—like oranges in Sergipe—see their visions of a dynamic future dashed if they don't act rapidly.

All this can add up to a more compelling force to bring about changed farming practices than a promise of "increased yields" by the extension service. Whereas the yield-increasing package with quite similar components promises to improve income, the anti-disease package promises to cut impending losses and thereby keep income from *falling*. The subsidies built into the disease package, and the reduction in transactions costs brought about by the heavy presence of the state in the disease-stricken zone, reduce the costs of adoption significantly in comparison to more normal times. Disease and pest epidemics, in sum, radically alter the measurability of success and failure, and the penalties for poor performance. This explains why states and growers who had done little for years about low productivity in an important crop like cotton could be jolted into highly effective action that, among other things, succeeded in transforming agriculture.

The literature of induced innovation stresses the importance of powerful grower groups in determining the paths taken by agricultural research and other agricultural institutions of the state.[7] But in driving the cases discussed above, the concerns of state and regional actors about tax receipts and the fate of the regional economy seemed at least as important as grower demands themselves. The literature of public choice, though showing how developing countrystates *have* acted independently of farmer interests in order to raise revenues, focuses exclusively on how these actions *penalize* agriculture. The state marketing boards for export crops in sub-Saharan Africa are the most commonly cited example, which squeeze the producers of these crops in order to raise revenues, and thereby jeopardize agricultural production.[8] With the disease campaigns, in contrast, the state's concerns about tax revenues led to actions that *favored* agriculture.

The combination of expected high rewards and high punishment for failure was not unique to the disease campaigns. It also characterized the "tough love" provided by strong governors to some components of the Northeast projects, as discussed above, and the good performance of some of the land expropriation-and-settlement programs. Just as the disease campaigners felt that "it was only a matter of time" until they lost the whole crop, so the agrarian-reform managers believed that it was just a matter of time until they would lose the gains they made, or the chance to act at all, if they did not move quickly and effectively; likewise, the Sergipe water engineers feared the loss of their jobs—as their demanding governor had threatened—if the rural water systems weren't in place well before the end of his term of office.

Up from Mediocrity

The successful dissemination of research findings through disease campaigns could not have occurred, of course, if the Northeast state research and extension agencies had not been doing something "right" during the longer period over which they so often received low grades in evaluation and supervision reports. The disease campaigns, in other words, must have represented only the final result of an ongoing and long-term process of research and field testing that was not bounded by the narrow agenda, the sense of urgency, and the high penalties of failure that characterized the disease campaign itself. One possible explanation of successful episodes embedded in mediocre institutional settings is that the task during the episode is somehow different than what the organization was usually doing. This kind of success would be less the result of a change in the capacity of the agency or its leadership than of a change in the nature of the demands made on it.[9]

If all that was necessary to produce the dissemination successes of the disease campaigns was the final "pull" of a state concerned about disease, does that mean that Northeast research and extension were doing fine all along, the poor grades notwithstanding? Another possible explanation of sudden good performance, in other words, is that the agencies were actually doing something right all along, including during the mediocre period. Without the benefit of hindsight arising from the successful episode, this "something" wouldn't get noticed and evaluators would have no reason to interpret anything about the generally mediocre agency as "right." In order to fully understand the lessons of the dissemination successes, then, it is just as important to understand what was being done right during these longer, quieter periods as during the more dramatic episodes.

The point of looking for the antecedents to success in prior mediocre times is not to re-write the earlier judgment, nor to say that what looked mediocre was really good—though that could conceivably be the result of such an

exploration. Though the successful episodes may all exhibit a distinct pattern of short duration, narrowing, concreteness, high penalties for failure, and easily measurable output, this may be only half the story. The more difficult part to discern, and program for, may be the ongoing qualities of an organization that allowed the flares of success to occur in the first place. Laying so much stress on the nature of these episodes, then, is not to argue that an enduring agency can be built only by arranging a long string of such episodes—though that might not be a bad way to start. A small step toward integrating the successful with the mediocre, and the episodic with the ongoing, would be to ask evaluation officers to routinely identify at least one antecedent to a current success in a former period of mediocrity. This would improve our understanding of what is important in institution building. The following section provides some additional suggestions. The section after the next lays a basis for dealing further with these questions by bringing in cases of successful disseminations that had nothing to do with disease.

Good Starts

One way to approach the problem of mediocre performance is to try to bestow on the more mundane ongoing work of agencies some of the traits associated with the bursts of performance around disease and pest epidemics. The kinds of successes described in this chapter and throughout this study have a tremendously energizing effect on an agency. When managers and staff think they can make something happen, they feel profoundly satisfied, heady, and wiser. They want to take on more and more.

Having an easy fast success at the start puts an agency on a roll that propels it into the succeeding, less dramatic stages. It now has a standard of performance to meet that is defined by its own performance in the earlier period, a newly acquired good reputation that it is proud of and wants to keep, and a new confidence about its ability to make things happen. That's why the new rural water agency in Sergipe was so keenly disappointed about its inability to do well with irrigation; this followed on the heels of its first success, and resulting high reputation, in installing rural water systems throughout the state, and in having the unstinting support of a powerful governor. Expropriations carried out by agencies in the first months of the PAPP projects had this same energizing effect, as did the disease campaigns themselves.

The land purchases required by the Bank of Piauí's new project unit, even before the project commenced, represented another such heady start (see Chapters 2 and 4). The project unit came up with the 30,000 hectares required by the Bank *before* the allotted time period expired, and acquired an additional 20,000 hectares to boot. This task had much the same characteristics of the disease campaigns: rapid and conspicuous results, easily measurable performance, high penalties for failure (the poorest state in Brazil losing the largest infusion of funding ever from an outside project), and narrowness and relative ease of execution (land could be purchased or otherwise acquired by any agency, not just a land agency, and doing so didn't require specialized expertise). Though the subsequent performance of the Piauí project unit has had ups and downs, there is no question that the first success had a significant formative impact on the agency, and contributed to its ability to move on to the more complex and less dramatic tasks of settlement thereafter.[10]

Success at these particular tasks, of course, does not guarantee that an agency will be successful at the more difficult subsequent tasks—as some of the experience with maintenance of rural water systems and providing services to new settlers have shown. But a first success is much better than none at all in creating capable agencies. Also, the problems of the successive phases often have to do with a failure to recognize the more difficult nature of these tasks, and to re-think them in a way that makes their execution more likely.

The disease campaigns also qualify as an easy first task—just as the boll-weevil campaign made for a good start for the southern U.S. extension service in the early twentieth century. Projects could narrowly identify a particular crop with a particular bottleneck to improved production, the breaking of which could occur in fairly short order and would have an impact on a reasonably large number of producers and workers. Disease would not have to be the only kind of problem identified. The "reality assessments" of Pernambuco state's project unit—carried out in conjunction with agricultural extension and research—conducted precisely that kind of exercise: they canvassed small-farm agriculture a few municipios at a time, identifying a problem for a particular crop cultivated by large numbers of small farmers in those municipios, and a solution that would break a bottleneck in production, processing, or marketing within a *limited* period of time—preferably, one crop cycle.

Thinking this way about projects is contrary to some of the current wisdom about agricultural research and extension for small farmers. The latter has been critical of crop-specific programs on the grounds that (1) they overexpose farmers and particular regions to the price fluctuations of a particular crop, and (2) they ignore or violate the complex farming-systems dynamics underlying the decisionmaking of farmers, which for small farmers in particular involve the production of many crops plus off-farm economic activities. Though this more sophisticated representation of economic decisionmaking represents a major advance in the understanding of small-farmer systems and how to help them, it is difficult and sometimes counter-productive to

build this kind of complexity into organizations. The large menu of possible activities allowed or encouraged by such a systems view of farming involves the kind of complexity, lack of clear performance measures, and absence of penalties for poor performance from which the successful episodes did not suffer.

Dissemination without Disease

The patterns running across the non-disease cases of successful dissemination shared certain similarities to those of the disease cases and throw more light on the question of what causes widespread dissemination of research findings to occur. Some of the examples drawn on for illustration are:

(1) The development and dissemination by the experiment station in Belém do São Francisco (Pernambuco) of an industrial tomato suitable for irrigated cultivation in the Petrolina-Juazeiro region of the São Francisco River Valley (Bahia-Pernambuco), a region that is now considered to be one of the only agricultural growth-pole successes of today's Northeast;[11] (2) the development and widespread dissemination throughout the Northeast of an early-maturing dwarf cashew variety by the research agency in Ceará; (3) the development of a fungus-resistant black bean by an experimental station of the state research agency of Pernambuco, widely adopted in the nearby black-bean-growing Irecê region of Bahia; (4) the widespread dissemination in Sergipe of research findings of the Boquim experiment station on the interplanting of cassava and passion fruit with orange trees; (5) the field testing and adaptation of improved varieties of vegetables by the Limoeiro experiment station in the *agreste* zone of Pernambuco, widely adopted in that region by small farmers, and most dramatically represented in the intensive cultivation of lettuce, green onions, and cilentro in the Natuba Valley; (6) the dissemination throughout the Northeast of a cistern for holding rainwater, developed by the Center for Research on Dryland Tropical Agriculture (CPATSA) in Petrolina, Pernambuco—part of the national system of agricultural research centers (EMBRAPA) specialized in particular crops; (7) the field testing and adaptation by the Pernambuco project unit of implements for animal traction, also developed by CPATSA; and (8) the modification, field testing, and adaptation of the standards used for transformers connecting up small-farmers irrigators to the electric power net, carried out by the National Development Bank in conjunction with a local organization in the southern state of Rio Grande do Sul; this led to a transformation of small-farm agriculture in that region from dryland to irrigated cultivation, and a nationwide change in official standards used by power utilities, which made connections easier and less costly for small irrigators.[12]

As with the disease episodes, the "pull" of demanders stands out in these stories. In the case of the industrial tomato, large food-processing firms in São Paulo contributed, along with the university there, to financing an industrial-tomato research project at the Belém-do-São-Francisco experiment station. The Arcoverde experiment station in Pernambuco, which came up with one of the most applied and small-farmer-oriented research agendas in the state, did so only after being invaded by a group of peasant farmers of the area; they would not leave the station, they said, until the station's management would hammer out a research agenda that was more relevant to small-farmer needs. The project-coordinating unit in Pernambuco, under heavy pressure from the governor to "do something for small farmers," put together a set of teams to do "quick-and-dirty" assessments, county by county, of crop problems and potential bottleneck-breaking interventions; out of these assessments came a set of applied, mini-research tasks—with dissemination and "results" being the specified end product.

The most influential demanders behind the successful disseminations were (1) other public agencies themselves, or individuals or groups of individuals within them; (2) medium-size commercial farmers who produced the same crop as the small farmers (oranges in Boquim, black beans in Irecê, cotton in various states) and who, as local elites, had a strong influence on experiment stations in their region and other field offices of state agencies; (3) elected leaders—governors, legislators, mayors—who increasingly viewed small farmers as an important constituency, and who were looking desperately for "productive" approaches to rural poverty, which was becoming more and more of a fiscal and political burden on their administrations; (4) the World Bank which, by insisting on a small-farmer orientation over many years, had empowered a generation of government technicians sympathetic to these concerns, and given them considerable experience in this area through the Bank projects; and last *and* least (5) small farmers themselves. The rest of this chapter treats three forms of this demand—from other public agencies, from local actors other than beneficiary groups, and from small-farmer groups. It closes with a discussion of issues of "supply."

The Case of the Inadequate Innovation

The dissemination of the CPATSA cistern originated in the visit of the governor of Sergipe to the CPATSA research center, and his asking what they had "on the shelf" that would have the biggest impact on the semiarid region. CPATSA strongly recommended its cistern, yet to be disseminated; the governor enthusiastically adopted the cistern and embarked on a program to install it throughout his small state—an effort that was subsequently picked up by other Northeast states to the point that CPATSA now

considers its cistern to be its most widely disseminated innovation. But when the state's rural water agency started installing the cistern, it turned out to be technically flawed; CPATSA had clearly not done the field testing and adaptation. Caught in the middle of a highly publicized program to supply water to poor rural households, the Sergipe governor and his water agency could not simply retreat. The water agency itself carried out the testing and adaptation that CPATSA should have, and came up with an improved model that was also only two-thirds the cost of the CPATSA version.[13]

A similar chain of events with another mechanical innovation of CPATSA occurred in Pernambuco. One of the project-unit managers took the latest in animal-traction implements from CPATSA. But when the unit tried to introduce this innovation to the small farmers of the region (where CAPTSA was actually located), they rejected it because it was too cumbersome to use, and designed for two animals rather than one; this doubled the requirements for capital and grazing land, a significant burden for poor farmers. The project unit, anxious to get results and not go back to the drawing board at CPATSA, consulted with farmers in the region about the necessary adaptations, and then contracted out iterations of the suggested changes to a local blacksmith. This kind of field testing and adaptation is, of course, what the research center should itself have done before releasing the implement package.

If the user agencies had known that the package they carried away from CPATSA was inadequate, they may not have taken it in the first place. Only because they were caught in a process of having to show results, and were intensely interested in doing so, did they finish what CPATSA had left undone. They valued the returns to be had from testing and adaptation more highly than did the research agency, whose performance was not judged by standards of adoption and dissemination. This experience suggests, along with that of the disease episodes, that the problem of agricultural research and extension lies partly outside these institutions: they have not been subjected to enough demands for results from users and others who *do* care about dissemination.[14]

The Local Connection

Local actors and institutions played an important role in the cases of successful dissemination—mayors and municipal governments, vocational schools, cooperatives, Rotary Clubs. In many cases, the important local actors were researchers at experiment stations who were born or raised in the area, or had lived for many years there; they also played important civic roles in their towns—they were perhaps small commercial farmers themselves, officers in the Rotary Club and other civic associations, and even mayors. They worked to promote the development of their municipio or region in general, and their interest in disseminating improved varieties and practices came out of that larger passion for bringing "development" to where they lived.

The director of the Boquim experiment station came from an orange-grower family, organized and headed the regional association of orange growers, and ultimately became a dynamic mayor of the municipio of Boquim; he was born and raised in Boquim, fiercely loyal to the region, and did not want to move to the capital city, only two hours away by paved road. Similarly, the president of the Irecê coop came from a prominent commercial farming family in the region, had a university degree in agronomy from the state capital, had moved back to Irecê after his studies because his family "just couldn't adapt" to the capital city, taught at the agricultural vocational school rather than a university, and used the school and his classes as a mini-experiment station for testing varieties and practices that he then disseminated to small farmers through the cooperative.

The researcher in charge of horticulture at the Limoeiro experiment station in Pernambuco was also a prominent member of the Rotary Club, and a long-time resident of the area. He had fought a long hard battle to assist tenant farmers in the Natuba Valley to acquire land for the irrigated cultivation of lettuce, green onions, and cilentro. He dedicated his research program to improving these crops, traditionally grown in the region by small farmers, and to disseminating the results to the Natuba farmers and others. The result of these efforts was a picture-postcard landscape in the Natuba Valley of rustically irrigated and intensive agriculture that was unusual for Northeast Brazil—a mini-success story captured in a poster circulated widely by the state's research agency.

Finally, the success of the National Development Bank (BNDES) in coming up with workable standards for the transformers for small irrigation pumps, and in getting them accepted by the state utility and hooked up to the power grid, depended on the enthusiastic participation of engineers teaching at the local vocational school; they viewed the small-farmer irrigation project as having the potential to significantly improve agriculture in their region, as well as the incomes of landless farmers. The BNDES had previously tried in vain to interest the engineering department of the state university to carry out this work under contract, and ended up contracting the local vocational school instead, which was eager to work on the problem.

The local institutions of these stories were less sophisticated and prestigious than the institutions through which the Northeast projects operated, or which the Bank tried to influence in a more dissemination-oriented direction—state and federal research centers, universities, state extension services. These more modest actors were eager to do the work because they were interested in the fortunes of their

region, and because their prestige and status came from making things work where they lived. Applied work was not second-class for them, the way it was for research institutions.

Another variation on the theme of strong local actors and strong demanders comes from the Boquim experiment station in the Tabuleiros Sul region of Sergipe. As noted above, that station played a central role not only in developing and disseminating improved varieties of oranges and the crops interplanted with it, but also in lobbying to bring juice-processing firms into the region and securing public subsidies for them; ultimately, this made it possible for the region to tap into the lucrative export market for frozen orange juice. In contrast to most experiment stations in the Northeast, the origins of the Boquim station were in dissemination, *not* research—a fluke of that region's particular history. The Boquim station was set up in the early 1970s as a mere "promotion station" for the new improved orange variety developed in the 1960s by the citrus research center at Cruz das Almas in the neighboring state of Bahia. (At that time, the region around Cruz das Almas also grew oranges.) As a result of these applied beginnings, and the central role played by oranges in the dynamic expansion of the Tabuleiros Sul region, Boquim's subsequent research always had an applied style. The Boquim station's sequence of institutional growth—"backing into" research from promotion—was just the opposite of that sought in the Northeast projects, which tried to get agencies doing research to move "forward" into more applied work. But whereas Boquim's origins and associations placed a high value on moving from application to research, there was nothing about the origins or associations of the research centers that would draw them from research into promotion.

The Boquim story, together with those told above of the CPATSA cistern and animal-traction implements, contains two lessons. The first is that supporting the more applied agencies to do field testing and adaptation may be a more effective way of bringing about the promotion and dissemination of research results than trying to cajole research institutions themselves into being more applied. The second is that researchers are more likely to be interested in applied work the more rooted they are in local development struggles. Researchers like these become the "demanders" of applied work because of their combined roles as researchers *and* civic leaders, promoters of local development, and local growers.

Local Elites Revisited

The importance of local boosterism in some of these stories of agricultural dissemination raises another set of issues. The "boosterists" who drove the search for better agriculture and its dissemination were local elites—university-trained agronomists who were sons of medium farmers in the region, locally born and bred agricultural professionals working in the field offices of state agricultural agencies, teachers in local vocational schools, mayors. But project designers concerned about poverty have shied away from local elites for two reasons: (1) given the chance, local elites have tended to appropriate the benefits of targeted projects and often act against the interests of small farmers and the poor; and (2) local government, as run by these elites, has tended to subordinate such programs to political purposes and to be technically and administratively weak. State agencies, like those carrying out the Northeast projects, often talk of bypassing local government and local elites in order to work "directly with the poor"—rural labor unions, cooperatives, and other less formal associations.

The fear that local elites and better-off farmers will divert programs away from the target group is well founded. The evaluation literature is full of case studies documenting this problem.[15] The lesson to be learned from the presence of local elites in the dissemination success stories, then, is not simply that important local actors should be allowed to occupy more space in these projects. A closer look at the successes shows that two additional factors pushed them in a small-farmer direction. Briefly, (1) the activity was such that small farmers would automatically benefit from an intervention that helped larger farmers or, even, that larger farmers could not benefit *without* the participation of small farmers (examples follow); and (2) the more centralized state-level programs were offering strong incentives to local actors to move their activities in a small-farmer direction.

The kinds of cases in which small farmers can benefit from interventions that help medium farmers who are also local elites, as illustrated in the cases discussed so far, fall into the following categories: (1) small and medium farmers produced the same crop and in the same way—oranges in Boquim (interplanted rather than monocropped by small *and* medium farmers), cashew in Ceará, black beans in Irecê; (2) disease or pest problems became epidemic and could not be wiped out without the participation of *all* farmers—the cotton boll weevil, orange disease in Sergipe; (3) public-good type investments (particularly roads) were undertaken that benefitted all, and to which local elites would often voluntarily contribute financing, given an appropriate incentive scheme—like the Bahia road fund; and (4) better-off farmers contributed because they were offered something by the state that they could not get on their own—the barter irrigation investments of Bahia, the negotiated land transfers, the municipal land donations.

The story of the BNDES/FERMIN road fund (see Chapter 3) is a clear illustration of how the state structured matching incentives in a way that elicited contributions from local elites toward public-good-type investments—as well as improving the quality of these investments.

Drawing local actors in distributionally desirable directions took other forms as well. The Irecê coop, for example, wanted PAPP irrigation funds for financing individual tubewell purchases by its medium-farmer members. But the Bank had insisted that financing for tubewells could be granted only in a way that served groups of smaller farmers, and not just individuals. Though the coop was disappointed at this stricture, it nevertheless enthusiastically oriented its irrigation program in a smaller-farmer direction, because this was the only way it could obtain funds for irrigation, as well as help it to attract new members.

What made the stories of successful dissemination work for small farmers, in sum, was not just the prominence of civic-minded local elites. There are too many stories to the contrary to draw that conclusion—namely, where local elites appropriated benefits, or acted against the interests of small farmers. Rather, the interests of the local elites and small farmers overlapped to certain extent—due to the nature of the crop or the activity, and the fact that more centralized public programs offered strong incentives to developmentalist local actors to make their initiatives broader. The co-participation of local actors in these state initiatives, in turn, made the outcomes better than they would have been if the state had been working on its own: the local actors had a certain kind of experience, understanding of local markets and production systems, and intense desire for their regions to prosper, that state institutions did not.

Direct through the Poor

In general, small farmers themselves were conspicuously absent as demanders in these tales of "induced" dissemination. The exceptions are (1) the story of the Arcoverde research station in Pernambuco, where small-farmers invaded the research station and threatened to remain there if it did not come up with a "relevant" research agenda, and (2) the small-farmer orientation of the Boquim experiment station, influenced partly by the clamorous presence in the region of two cooperatives of small growers of oranges and associated crops. This and the following section discuss some *non*-coop forms of the expression of small-farmer demands.

The community-participation component (APCR) of the second generation of Northeast projects was meant to support the "grassroots" form of organizing and determining of needs that cooperatives had not been able to do. Learning from past experience, the Bank and the Brazilian government wisely decided to support associations of small farmers that were simpler than the formal, complex, and difficult cooperative form. Some APCR designers hoped the community groups would channel user demands to extension and research, though the project set up no formal mechanism for this. Interviews with research and extension field offices, however, showed that APCR or other user groups were not included in or consulted for the agenda-setting meetings of these agencies. One of the reasons this did not happen, according to some APCR proponents who favored a somewhat different design, was that the component provided funds and support for farmer groups to do their *own* mini-projects—community-owned grain mills, stores supplying agricultural inputs, seed banks, collective plots using intensive farming practices. Though many of these efforts were worthy, they involved a more difficult and bureaucratized organizational form, like the coops themselves, than that necessary for the kind of organized expression of needs made, for example, by the farmers who invaded the Arcoverde experiment station. Having a separate "participation" component, according to this view, did not subject the agencies carrying out the *other* components to the wholesome effects of user demands.

After the APCR component has more history, it may turn out that the mini-projects will have been a necessary first step in the formation of viable small-farmer groups. The component may eventually spill over its boundaries to influence more the agendas and work styles of other agencies, particularly extension and research. If this happens, this kind of effective demand-making may well have a greater impact on the productivity of small-farm agriculture than the mini-projects themselves—though via a less direct route. To achieve this end, it may have been necessary to first bring the small farmers right into the program with their own component, like a Trojan Horse. Some of the designers of the component, as it now stands, actually hoped this would happen—with the APCR being half of a "sandwich strategy" of pressure on state agencies—the federal government and the Bank being the other half.[16]

Today, with the Bank's support, the PAPP program is experimenting with a new arrangement that comes closer to the user-demand approach than APCR itself—the so-called Programming by Project (PPP).[17] In one or two municipios, the project unit works out an agenda for research and extension with a farmer association and then contracts those agencies for a fixed period to carry out the tasks specified therein; in some of these cases, farmers even specify the particular extension agent they want. These arrangements, though not part of the APCR component, sometimes draw on the associations of farmers formed around the APCR mini-projects. In fact, these experiments are today moving away from the original version of PPP to more crop-specific "special action" programs, because the PPP model is now seen as still too diffuse.

Though the PPP experiments are too new to be evaluated, they represent one possible approach to funding extension and research through the demand side. They bring to extension and research many of the characteristics of the

successful cases of dissemination—narrower agendas, shorter time periods, clearer goals measured in terms of outputs rather than inputs, and distinct penalties for non-performance—namely, non-renewal of the contract, or strong user protests if performance is not forthcoming. They also provide the same kind of control over the work environment that project units acquired by taking over activities from other agencies. Though some Bank staff see the PPP and similar projects as inappropriately small for a multi-million dollar program like the Northeast projects, the design of these projects nevertheless indicates the kind of direction that the larger program could take.

Improving Supply through Demand

Agriculture and rural-development projects generally take a "supply-side" approach to research and extension. They attempt to build up these agencies' technical strengths, insist on more field tests and demonstration plots, and try to cajole them into working more collaboratively with each other. But the dissemination stories of this study show that demand-side factors were very strong in driving research to do field testing, adaptation, and dissemination. This suggests that projects should channel some of the funding for applied research to the demanders, rather than the suppliers. Either the demanders will do the applied work themselves—as with Sergipe's water agency and the cistern, Pernambuco's project unit and the animal-traction implements, and the Boquim station in Sergipe; or they can contract research institutions themselves to do applied work on specific crops, varieties, or other inventions—as with the São Paulo food-processing firms and the industrial tomato, and the Bank of the Northeast and improved sheep varieties. With this approach, research could still receive project funding, but not directly. Channeling the funds to research through the demanders would make it more in the interest of research to become more applied—just as channeling funds to the road agency in Bahia through the loans to municipalities made it more in that agency's interest to keep costs down, and get projects completed on time.

There is nothing like a major research breakthrough, finally, to make research more interested in dissemination. The research agencies and individual researchers who made significant breakthroughs—like Ceará's dwarf cashew and disease-resistant banana, Boquim's improved orange, and Belém do São Francisco's industrial tomato—were very proud of them. They wanted to get their due credit and show their results off as much as possible—and hence to be conspicuously present in the dissemination effort. At these moments, and around these particular breakthroughs, research lost its reclusive character. Word of its breakthrough spread rapidly in the informal research and extension networks throughout the entire region—not just inside the state—and extension agents appeared from all over with requests for the new variety. When some of Bahia's extensionists heard about Ceará's breakthrough in cashew, they rented a truck out of their own money and drove there to buy as many of the new seedlings as they could; extensionists from the Irecê region in Bahia swarmed around the Belém-do-São-Francisco research station in Pernambuco to acquire its new fungus-resistant black bean variety, about which word had also spread quickly; when the Paraíba project unit was looking for something to improve productivity among the small banana producers of the project region, they heard about Ceará's disease-resistant variety and contacted that center directly.

Whether the research center did the disseminating, or simply opened its doors to interested parties, the path of dissemination underlying these success stories usually crossed state lines. It also involved informal networks between professionals who knew each other from the university or conferences, rather than ongoing patterns of applied work or of collaboration between research and extension within any particular state. In fact, many of the stories about successful research findings and their dissemination started with a telephone call by a researcher or extensionist to a colleague in a sister institution *outside* the state. In fact, a majority of these calls went outside the Northeast to Piracicaba in São Paulo—where the country's most prestigious state research institute, ESALQ,[18] was located. This suggests institutional "spread effects" from the richer part of the country to the poorer, contrary to the common portrayal of the Northeast as stagnant and isolated from the dynamism sweeping the rest of the country.

The cross-state paths of dissemination also revealed a pattern of implicit specialization by state research agencies—Ceará for dwarf cashew and banana, Boquim in Sergipe for oranges, Belém do São Francisco in Pernambuco for black beans and industrial tomatoes. But the model of agricultural extension and research behind the Northeast projects goes somewhat against this grain. As in several other countries, that is, each project tried to build up a self-contained research-and-extension establishment within each state, with a broad agenda of crops and activities; and each project tried to forge a collaborative link between extension and research within that state.[19] But dissemination in the successful cases involved intense episodic interaction between extension and research (or research and research) *across* states and outside the Northeast. And this represented a kind of *de facto* specialization in certain crops or varieties by state research agencies across states, independently of what the specialized national research centers were doing.[20]

Rural development projects should support these cross-state collaborations and disseminations because they represent moments when research *wants* to be more applied and open and extension is enthusiastic about collaborating. But state-specific project support for building up a broad-palette research and extension agency in each state, and forcing a marriage between the two, does not exploit the comparative advantage that develops among state research agencies. It does not help state research centers to spill their most impressive successes beyond state borders, and it does not encourage the informal exchanges of information between states and, particularly, between the Northeast and the more developed south, that were crucial to many of the dissemination successes. In order to encourage these kinds of cross-state exchanges, projects might make funds available to research agencies for choosing one or two of their *already-proven* successes and doing more applied and dissemination work with only them. This would amount to funding research centers only for activities in which they already had a built-in reason to be interested in being applied.

The idea of channeling funding to research through users in search of solutions to particular problems, and of funding dissemination efforts around particular successes, may seem to be a haphazard way of building institutional capacity in research and extension. The cases of successful dissemination, after all, must have come out of a research environment in which scientific inquiry had the "luxury" of proceeding on several fronts at once. In this vein, one of the Bank's biggest institution-building success stories in agricultural research worldwide came out of a long period of broad "supply-side" support to EMBRAPA, Brazil's nationwide research agency—which until recently had a reputation as one of the developing country's best institutions in agricultural research.

Rural development projects represent quite different institution-building mechanisms than that through which the Bank supported EMBRAPA. The rural projects involved *many* agencies, had *short* time horizons, focused on *one* geographic area, and needed to show concrete results. All of these features made for a quite different kind of intervention than that which allowed for the attention and resources lavished by the Bank, over a long period of time, on a single institution like EMBRAPA. Strong agricultural research capacity, in sum, cannot be the by-product of rural development projects. But rural development projects provide an excellent opportunity to make research and extension more responsive, and agriculture more productive, by administering strong doses of user demand to these institutions.

The conclusions and recommendations of this study appear in the Executive Summary.

Notes

1. For example, WB (1983 and 1987). For a cross-country review of evidence of the economic impact of agricultural extension, see Birkhaeuser et al (1989).

2. For analyses of Brazilian agricultural extension and research, see Alves (1988), Evenson (1989), and Homem de Melo (1986).

3. The boll-weevil campaign actually began with dissemination of a kit including an electrodyne applicator for pesticide, which had been developed by a multinational seed firm operating in Brazil (ICI). The early-maturing improved variety (*precoce*) was introduced, and included in the kit, somewhat later.

4. This contrast parallels that between Latin America's import-substitution policies and those of East Asia. The East Asian countries were as lavish as Latin America with tariff protection and credit subsidies for industry, but they were also highly selective about the sectors and firms to which protection was granted, and very demanding of performance; if a firm's output or exports did not increase within a year or two, the subsidies were abruptly withdrawn (Amsden 1989). Latin America, in contrast, offered protection more across the board, with less selectivity and fine-tuning and no demand for performance (Sachs 1985).

5. Only the case of bananas, moreover, occurred fully within the Bank-funded project. In Sergipe, the disease problem and its response came before the project, though the project supported the institution that led the disease campaign—the Boquim experiment station. In cotton, though the Bank was involved with the boll-weevil problem, the response involved initiatives mainly outside the Northeast projects. Some of the agencies carrying out the campaign were the same as those carrying out the Northeast projects and, later, availed themselves of project funds.

6. In the first quarter of the 20th century, the southern branch of the U.S. extension service originated in a similarly dramatic campaign against the cotton boll weevil. In fact, the "good start" of the southern branch was attributed to the "easiness" of that campaign, in terms of its highly standardized and homogeneous mission. This contrasted with the more "difficult" evolution of the northern extension service, where each state developed its own particular multifacted work agenda, partly because of the greater heterogeneity of agriculture in the north (Baker 1936).

7. For example, Binswanger and Ruttan (1978).

8. Bates (1981) is the seminal work in this literature. For a much earlier statement of this concern, see Bauer and Paish (1952).

9. In a personal communication, Vernon Ruttan reports that the extension agencies that participated in the highly successful dissemination of Green Revolution varieties in South Asia looked just as listless and mediocre immediately *before* that period as the Northeast agencies have been so frequently portrayed.

10. The strategy of a well-chosen first task seems to have been behind the design of the Aga Khan Rural Support Programme (AKRSP) in Pakistan (World Bank 1987 and 1990b). The program was organized around new village-level associations which, as their first task, were given an infrastructure project of their choosing. In an unrelated study of village associations in Colombia, Edel (1969) actually found that those organizations starting with a works project—as opposed to other tasks like credit or a community store—had a much higher survival rate, suggesting therefore that works projects were good first tasks.

11. Though this development was initially associated with small-farm production, much of it on contract to tomato-processing firms, the latter have been increasingly buying up lands and undertaking production on their own, changing the initial character of this expansion more to one of large scale, high technology, and contract labor.

12. Though this last case occurred outside the Northeast, the circumstances surrounding it were quite similar to those of the Northeast projects. The achievements of this case were applied to subsequent BNDES projects in the Northeast, and it also repeats the patterns found in the Northeast examples.

13. The water agency's various iterations of the cistern finally ended up with the "chinese-hat" form, which was superior in that (1) its conical shape avoided the stress points in the corners of the previous rectangular version, which had caused leaks and required difficult repairs; (2) the concrete, conical roof was maintenance-free, in contrast to the tin sheeting or wooden

beams of previous forms, which were also frequently stolen for roof repairs; (3) the concrete "hat" eliminated the need for plastic sheeting, subject to tearing, which was used to cover the brick-walled-rectangular and tin-roof-covered versions and to seal their interior; and (4) it held significantly more water than CPATSA's cistern.

14. Another success story attributable to user demand for research comes out of a recent A.I.D. evaluation of its support for many years to institution building in agricultural universities in Brazil (Sanders et al 1989). Though generally positive on institution-building grounds, the evaluation points to the difficulty of getting these institutions to do more applied and "relevant" research. The case study on the Center for Agricultural Sciences at the federal university in the Northeastern state of Ceará described an important exception to this rule: the applied research on (1) improved sheep varieties, leading to a widely disseminated improved variety (Morada Nova Branca), and (2) improving the carrying capacity of the native range in the semi-arid zone of Ceará for beef cattle, goats, and sheep. Unlike the rest of the university's agricultural research, the study pointed out, these more applied results came out of research programs that were *contracted for* by the Development Bank of the Northeast (BNB), a regional development banking parastatal. The BNB's contracts with the university required and financed the extension work necessary to field test and disseminate results (Sanders et al 1986, and 1989, Annexes D and E).

15. See, for example, Peek (1988) and the evaluation studies cited therein.

16. This term, and the phenomenon it describes, was first identified and developed by Fox (1986).

17. As often happens with successful experiments, different actors claim credit for the idea. Bank staff point to a technical assistance unit in SUDENE of the Food and Agriculture Organization (FAO/CP), which worked closely with the SUDENE unit monitoring the Northeast programs and the Bank. Each Brazilian agency or unit working on PPP denies this, pointing to a number of other Brazilian sources of the idea.

18. Escola Superior de Agricultura Luíz Queiróz.

19. Regionwide research components *were* included in the PAPP projects in Sergipe (US$11.3 million) and Bahia (US$8 million)—with CPATSA assigned a coordinating role. The bulk of the research effort of the program, however, was state specific—US$85 million out of US$105 million, or 82 percent (Table 1.7). The regionwide transfer of research results under these components, moreover, did not work as well as hoped. Interestingly, CPATSA was never mentioned in the stories recounted above of out-of-state contacts of research centers for information and help.

20. Specialization in particular crops was left largely to the crop-specific research centers of the nationwide research system, EMBRAPA. There are four such centers in the Northeast—citrus in Bahia, dryland tropical agriculture in Pernambuco, cotton in Campina Grande, goats and sheep in Ceará. EMBRAPA has been the recipient of the two major Bank loans.

Appendix

Table A.1: Major Crops in Northeast Brazil

Crop	Percentage of Total Northeast Crop Value[a]		Percentage of Brazilian Output[b]	
	1977	1979–81[c]	1973–75	1986–88
Cassava	20.5	13.9	45.6	49.5
Caco	18.9	18.6	95.5	82.5
Cane	15.7	25.3	38.1	27.9
Beans	9.1	10.7	30.4	29.8
Cotton	8.6	7.0	35.6	17.9
Corn	5.1	3.0	9.3	5.5
Rice	4.9	5.1	13.2	14.3
Bananas	4.9	4.4	39.9	39.0
Tomatoes	1.9	1.6	23.4	34.3
Coconut	1.9	1.4	93.8	90.6
Sisal	1.4	1.7	100.0	100.0
Sweet Potato	1.2	0.8	n.a.	36.5
Tobacco	1.2	0.6	22.1	12.8
Onions	0.5	0.8	13.3	13.4

a. Source: May (1986: T.5).
b. Source: Based on data from FIBGE (various years).
c. 1979–83 were drought years in the Northeast. Data in this form not available for later years.

Table A.2: Northeast and Brazil: Changes in the Production of Four Major Food Crops, 1973–88[a]

Compounded Annual Growth Rates of Total Output[b] (%)

Year	Beans		Corn		Cassava		Rice	
	Northeast	*Brazil*	*Northeast*	*Brazil*	*Northeast*	*Brazil*	*Northeast*	Brazil
1973/75–1976/78	-1.8	-1.0	-0.3	2.6	3.6	0.2	11.4	6.2
1984/86–1986/88	-4.9	-2.7	-6.8	4.8	0.0	0.3	1.6	4.8
1873/75–1986/88	0.1	0.1	-0.8	3.3	0.1	-0.5	3.8	3.2

Compounded Annual Growth Rates of Yields in Tons per Hectare[b] (%)

1973/76–1976/78[c]	-2.8	-2.0	-0.8	0.2	-0.7	-0.9	1.9	-0.7
1984/86–1986/88	-7.9	-3.5	-10.0	1.6	-0.7	0.0	-5.3	0.0
1973/76–1986/88	-2.5	-1.5	-2.0	1.5	-0.3	-0.1	-1.1	1.5

Output and Yields of Four Major Food Crops, Northeast and Brazil, 1973–88[a]
Output ('000 tons, 3-year moving averages)

Year	Beans		Corn		Cassava		Rice	
	Northeast	Brazil	Northeast	Brazil	Northeast	Brazil	Northeast	Brazil
1973/75	682	2,244	1,464	15,777	11,608	25,442	921	6,916
1976/78	632	2,154	1,454	17,458	13,398	25,690	1,415	8,760
1984/86	812	2,485	1,605	21,435	11,655	23,292	1,470	9,368
1986/88	695	2,279	1,298	24,704	11,683	23,540	1,548	10,766

Yields (tons per hectare, 3-year moving averages)

1973/76[c]	0.37	0.52	0.58	1.51	10.95	12.38	1.30	1.48
1976/78	0.33	0.48	0.60	1.52	10.64	11.96	1.39	1.44
1984/86	0.34	0.46	0.60	1.79	10.75	12.26	1.30	1.84
1986/88	0.26	0.42	0.44	1.87	10.56	12.26	1.11	1.83

Source: Based on FIBGE (various years).

a. The drought years of 1979–83 have been excluded.

b. Calculations are based on three-year moving averages.

c. Yields for the 1973/76 period are based on simple averages of 1973 and 1976 data because 1974 and 1975 acreage data were not available.

Table A.3: Northeast Brazil Rural Development Projects: Appraised and Actual Unit Costs[a]

Project	Total Costs		Direct Beneficiary Families[b]					Project Area	
			Number			Costs per Family		Area	Costs per MK2
	Appraised US$1988[c] millions	Actual US$1988 millions	Appraised '000s	Actual '000s	Actual as Percentage of Appraised	Appraised US$1988	Actual US$1988	Km^2 '000s	Appraised[d] US$ 1988
	(1)	(2)	(3)	(4)	(4/3)	(1/3)	(2/4)	(8)	(1/8)
POLONORDESTE									
Rio Grande do Norte	59.6	60.2	15.0	13.0	86.9	4,300	4,992	21.0	3,071
Minas Gerais I	259.8	257.9	25.5	27.8	108.9	10,188	9,290	35.0	7,423
Ceará/Ibiapaba	76.4	42.8	5.8	8.7	150.5	16,569	4,897	4.8	20,021
Paraíba/Brejo	108.7	39.9	7.4	7.4	100.0	16,459	6,047	1.6	77,089
Bahia/Paraguaçu	179.7	118.9	17.0	21.0	123.7	10,571	5,654	60.8	2,957
Sergipe/Tab. Sul	117.9	50.2	8.4	5.3	62.7	14,607	9,940	6.0	20,369
Pernambuco/Agr. Set.	180.9	159.9	15.5	23.0	148.0	12,131	7,241	10.8	17,418
Minas Gerais II	261.8	98.3	30.0			8,727		61.0	4,292
Ceará II[e]	221.1	128.5	60.0	58.3	97.2	4,030	2,203	146.8	1,647
Piauí	109.3	51.5	11.3	8.4	74.2	10,602	6,139	24.3	4,930
Maranhão	148.8		38.8			4,077		50.7	3,124
Bahia II	203.2		45.0			4,693		76.6	2,757
Total	1,927.3	1,008.1	279.8			108,705	47,112	499.4	165,098
Simple Average	160.6	100.8	23.3		88.3	6,889	5,889	41.6	4,057
Weighted Average[f]					105.8	9,059	4,617		13,758
PAPP									
Sergipe	146.9		17.5			8,394		16.3	9,018
Rio Grande do Norte	153.6		35.0			4,387			
Bahia	385.5		80.0			4,819		265.6	1,451
Piauí	173.5		65.0			2,669		145.4	1,193
Pernambuco	203.9		73.0			2,793		62.0	3,288
Ceará	275.2		122.8			2,241		144.3	1,907
Paraíba	128.1		37.8			3,390		25.6	5,011
Minas Gerais	161.1		38.7			4,163		120.7	1,335
Maranhão	178.2		73.0			2,440		130.7	1,364
Alagôas	89.3		32.4			2,758		15.0	5,955
Total	1,895.3		575.2			38,054		925.6	30,521
Simple Average	189.5		57.5			3,805		102.8	3,391
Weighted Average[f]						3,295			

Source: same as Table 1.1.

a. A "blank" indicates that data were not available.

b. IMF GNP deflator (1988 = 100) (IMF 1989: 724). See Table 1.1, footnote (b) for explanation of calculations.

c. Direct beneficiary families: see Table 1.1, footnote (c).

d. The actual size of the project area is not available.

e. The Ceará II project covered the entire state.

f. Reported only where significantly different than simple average.

Table A4: Northeast Brazil Rural Development Projects: Drinking Water Supply, PAPP
(appraised expenditures)

State	Drinking Water Supply		
	Current US$ millions	*Percentage of Water Component*[a]	*Percentage of Project Baseline Costs*
Sergipe	3.1	34.1	3.3
Rio Grande	2.9	15.9	2.2
Bahia	6.7	23.5	1.9
Piauí	1.6	8.7	1.0
Pernambuco	1.7	9.7	0.9
Ceará	2.8	12.5	1.1
Paraíba	2.4	11.0	1.9
Minas Gerais	2.0	9.0	1.8
Maranhão	2.8	14.3	1.6
Alagôas	1.5	100.0	1.7
Total	27.6	15.3	1.6

Source: See Table 1.1.

a. The remaining sub-components of the water component include: public irrigation (67.7 percent of total water component), feasibility studies for irrigation (6.6 percent), fisheries (5.9 percent), and institution building (4.0 percent).

Table A.5: Northeast Brazil Rural Development Projects: Appraised Costs by Component by State, PAPP
(US$ current millions)

Project Component	*Total Value*	*Sergipe*	*Rio Grande*	*Bahia*	*Piauí*	*Pernambuco*	*Ceará*	*Paraíba*	*Minas Gerais*	*Maranhão*	*Alagôas*
Water Resources	166.5	9.2	18.4	28.5	18.6	17.7	16.7	19.1	19.9	16.9	1.5
Agricultural Research[a]	90.4	5.9	7.4	27.7	7.7	7.3	7.0	7.9	5.2	9.6	4.7
Rural Extension	345.2	16.6	28.9	72.6	35.2	37.4	54.3	25.2	23.9	30.8	20.3
Rural Investment Credit	427.2	15.1	23.8	74.8	41.2	49.6	67.3	37.7	32.9	50.4	34.4
Marketing	33.8	2.5	4.0	11.7	1.6	5.2	2.5	2.4	1.0	2.6	0.3
Support/Small Communities	221.9	9.0	10.4	42.2	21.8	26.6	41.4	14.4	18.1	25.9	12.1
Project Administration	139.9	6.0	10.1	35.7	9.9	16.9	23.9	8.8	5.7	14.0	8.9
Subtotal: Baseline Costs	1,424.9	64.3	103.0	293.2	136.0	160.7	213.1	115.5	106.7	150.2	82.2
Physical Contingencies	24.5	1.5	2.4	3.8	2.0	1.7	4.5	2.8	1.8	3.1	0.9
Price Contingencies	229.4	29.5	30.8	51.2	22.3	26.0	36.7	5.6	5.0	19.0	3.3
Regional Components[b]	43.0	35.0		8.0							
Total Project Costs	1,721.8	130.3	136.2	356.2	160.3	188.4	254.3	123.9	113.5	172.3	86.4
				(Components as Percentage of Project Baseline Costs)							
Water Resource Development	11.7	14.3	17.9	9.7	13.7	11.0	7.8	16.5	18.7	11.3	11.3
Agricultural Research[a]	6.3	9.2	7.2	9.4	5.7	4.5	3.3	6.8	4.9	6.4	6.4
Rural Extension	24.2	25.8	28.1	24.8	25.9	23.3	25.5	21.8	22.4	20.5	20.5
Rural Investment Credit	30.0	23.5	23.1	25.5	30.3	30.9	31.6	32.6	30.8	33.6	33.6
Marketing	2.4	3.9	3.9	4.0	1.2	3.2	1.2	2.1	0.9	1.7	1.7
Support to Small Communities	15.6	14.0	10.1	14.4	16.0	16.6	19.4	12.5	17.0	17.2	17.2
Project Administration	9.8	9.3	9.8	12.2	7.3	10.5	11.2	7.6	5.3	9.3	9.3
Subtotal: Baseline Costs	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Same as Table 1.1.
a. Includes US$1.7 million for environmental protection in the Maranhão project.
b. Funds for regional development and coordination from Sergipe and Bahia SARs.

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