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INSTITUTIONAL SUSTAINABILITY AND RURAL DEVELOPMENT:

ISSUES FOR ASIA AND THE NEAR EAST IN THE 1990S

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ABSTRACT

Institutional Sustainability and Rural Development: Issues for Asia and the Near East in the 1990s

This paper looks at some of the factors that affect institutional sustainability, making particular (though not exclusive) reference to Asia and the Near East. It focuses (again not exclusively) on two sets of institutions that are central to rural and agricultural development. The first set are colleges or universities that teach agricultural science and related subjects; the second set are public agencies responsible for integrated rural development projects (or what is often now called area or regional development).

The focus on these two sets of institutions is in response to U.S. development strategy, which has given special attention to higher education and area development projects. Higher education, of course, is critical to the processes of technology transfer and agricultural diversification, while area development is central to better natural resource management and employment generation. USAID's experiences, in turn, have generated numerous insights as to how to bolster educational and regional development institutions, and have also stimulated demand from the field for guidance about nourishing these types of institutions in the future.

Institutional sustainability is not always a feasible objective, nor even necessarily a desirable one for some projects. Insurmountable external and internal problems can terminate almost any institution. The odds for sustainability are improved, however, when an organization is able to adapt itself to its environment and to bring its operations in line with its resource endowment. Achieving a "fit" among these internal and external elements is the role of organization strategy.

While AID and other donors devote much energy to international and national strategy issues,they have tended to ignore strategy at the organizational level. The study and training of project management has focused on administrative functions, i.e., on the routine tasks of budgeting, accounting, procurement, and so forth. Relatively little attention has been given to the entrepreneurial dimension of management, i.e., to the non-routine job of strategic planning and implementation.

The entrepreneurial function is well-known in the private sector, but as Schultz (1981) points out, it contributes importantly to the building of agricultural institutions in the public sector, as well. A public entrepreneur is someone who starts or elaborates a public organization and alters significantly the existing pattern of allocation of public resources (Lewis, 1980). It is increasingly evident that creative leadership of this sort is a major ingredient in the development of sustainable institutions.

The development field, to the extent that it deals with public entrepreneurship at all, often misinterprets it as solely a matter of charismatic leadership, and therefore as something unique and non-duplicable. Certainly the more flamboyant, daring aspects of entrepreneurship cannot be taught or repeated. Strategy formulation, on the other hand, is a transferable skill. For AID to increase the probability of institutional sustainability in the 1990s, it needs to rethink its approach to management training and to project design, to put greater emphasis on managerial choice, on developing strategies at the organizational level, on evaluating environmental conditions realistically, on anticipating change, and on not overreaching institutional limits. This would not guarantee institutional sustainability,but might improve the chances that any given project would continue to provide benefits after AID funding runs out.

INSTITUTIONAL SUSTAINABILITY AND RURAL DEVELOPMENT: ISSUES FOR ASIA AND THE NEAR EAST IN THE 1990S

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American foreign assistance policy aims officially "to build and maintain the social and economic institutions necessary to achieving self-sustaining growth" (U.S. Congress 1986). This goal of institutional development is nowhere more important than in the rural and agricultural sectors, which continue to be the source of most employment in developing countries. Except for emergency relief, where the delivery of food for consumption is unavoidable, lawmakers insist that assistance for the countryside be an investment, that it generate a flow of advantages that endures after the external funds run out. To have lasting impact, U.S. efforts to promote rural areas overseas, and agriculture in particular, need to work with durable institutions inside the recipient countries.[1]

This paper looks at some of the factors that affect institutional sustainability, making particular (though not exclusive) reference to Asia and the Near East. It focuses (again not exclusively) on two sets of institutions that are central to rural and agricultural development. The first set are colleges or universities that teach agricultural science and related subjects; the second set are public agencies responsible for integrated rural development projects (or what is often now called area or regional development).

The focus on these two sets of institutions is in response to U.S. development strategy, which has given special attention to higher education and area development projects. Higher education, of course, is critical to the processes of technology transfer and agricultural diversification, while area development is central to better natural resource management and employment generation. The Agency for International Development's (AID) experiences, in turn, have generated numerous insights about how to bolster educational and regional development institutions, and also stimulated demand from the field for guidance about nourishing these types of institutions in the future.

AID's Asia and Near East Bureau has responded by sponsoring field work on the topic of institutional sustainability, which, along with other recent research, is drawn upon here. Other types of institutions--local governments, small business enterprises, non-government organizations, and so forth--are also of great importance in rural and agricultural development, but specific questions about their sustainability will not be the major concern here. Nor will development programs or policies be discussed,

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[1]Indicative of the current concern with sustainability is a symposium, "Sustainable Development: In Search of Lasting Solutions," held at the John F. Kennedy School of Government, Harvard University, 22-23 April 1988.

though some of the observations made below about sustaining projects would certainly apply to them, too.[2]

The paper starts by briefly exploring the meaning of the key terms "sustainability" and "institution." Then it reviews the latest quantitative studies of sustainability, putting them in a comparative perspective, and proceeds to describe the importance of the internal and external environments for sustained educational and area development (and other) institutions. Finally the strategic management implications of sustainability are discussed.

SOME MATTERS OF DEFINITION

Development "sustainability" is obviously not a new issue. The folklore of foreign aid is replete with tales of equipment that never worked in the field and was left to rust, of well-intended recommendations that local people disregarded, of organizations that succumbed to apathy if they ever functioned in the first place. Critics of development have always complained about this sort of waste. In the mid- to late-1980s, however, sustainability has surfaced to be a distinct and pressing concern of policy makers. As the last decade of the twentieth century approaches, the expansion of cropped area and the adoption of modern farming techniques are putting new, perhaps irreversible, stress on the natural environment in Asia (and elsewhere, too), while soft international markets for agricultural commodities are forcing reappraisal of the possibilities for increased farm exports. Conventional development strategies seem more and more to have run their course, yet fresh investments have been difficult to fund, due to continued "aid weariness" among the donor countries and to rising indebtedness among the recipients. Finding ways to wield development resources for lasting impact has become accordingly more imperative.

The academic disciplines each cut into sustainability problems from a different angle.[3] Three different aspects stand

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[2]A development project, as Hirschman (1967, 1) puts it "connotes purposefulness, some minimum size, a specific location, the introduction of something qualitatively new, and the expectation that a sequence of further development moves will be set in motion." In the 1980s AID has given higher priority to programs and policies than it did earlier (AID 1982).

[3]Sustainability is an issue in sectors other than agriculture, of course. Health specialists, for example, are usually more concerned with the clientele than the implementing agency, and see the problem in terms of promoting affordable preventative health measures, as opposed to curative care alone, that enable

out. Agricultural and natural scientists tend to frame the problem of sustainability in terms of the long-term impact of current farming practices. The chemicals and intensive cultivation associated with Green Revolution technology can degrade the environment and waste energy resources; scientific breeding of seed may reduce the native genetic diversity of crops, making food supplies more vulnerable to plant disease and pests. Because of such problems, agriculturalists and naturalists are increasingly concerned with identifying and promoting methods of cultivation that can protect and enhance nature's assets, while continuing to produce enough food to satisfy burgeoning populations (Douglass 1983, AID 1987).

Economists, by contrast, seem somewhat less preoccupied with the ecological dimensions of sustainability per se, since the mining of natural resources can be justified from an economic point of view (Tisdell 1988), and more troubled by the man-made market distortions that curtail the growth of production and employment in the Third World. The most widespread examples of these distortions are the ill-considered or politically convenient price regimes that penalize the rural sector in many developing countries. There are extended economic costs to such policies, for as the World Bank (1986, 69) notes: "Discrimination against agriculture on a sustained basis not only reallocates resources within agriculture but also draws them out of it. As labor and capital move out and technical progress slows, the long-term losses can be large."

Management experts tend to make the development project their unit of analysis, and to worry about how to meet recurrent costs (Schroeder 1987) or permanently improve capacity for implementation (Kearns 1988). Donor-backed projects frequently experience a collapsing "balloon effect" when external funds and advisors get withdrawn (Morss et al. 1976, 9). Because they are often organizationally quarantined, with special budget and staff, such projects may leave little lasting imprint on regular government agencies, and in many cases may actually weaken them by drawing off the best national talent (Bremer 1984, Honadle & VanSant 1985). From the administrative point of view, therefore, sustainability is a question of how to assure the continuation of valued outcomes for project beneficiaries (VanSant 1987, Gow 1988).

One thread that connects these agricultural, economic, and management perspectives on sustainability is that effective social institutions must be in place to deal with development's current challenges. To overcome the environmental consequences of modern farming, for instance, is likely to require (among other things)

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poor people to enhance their physical well-being over the long-run (Stinson 1987).

that scientific organizations attack novel research problems, that private enterprise produce greater quantities of more sophisticated farm inputs, that farm advisory services disperse new knowledge, that local authorities mobilize farmers to change collective and individual behavior, that farmers' organizations collect and market unfamiliar crops. Even something as straightforward as price reform requires considerable institutional capacity to analyze and monitor the impact of new prices, let alone to manage any political backlash. Virtually all problems of "development sustainability" have an institutional dimension to them. Unfortunately, few third world countries have the depth of institutions to carry through the complex and exacting duties likely to be needed in the 1990s (Brinkerhoff 1986, Cernea 1987, Israel 1987), though this is generally less true in Asia than in Africa.

What are institutions? The concept is subtle and thus subject to confusion. According to Huntington's definition (1968, 12), they are stable, valued, recurring patterns of behavior. Institutions thus include rules or procedures that shape how people act, and roles or organizations that have attained special status or legitimacy. Their importance is just now being rediscovered by the social sciences (March & Olson 1984). An example of a rule-oriented institution is a system of land tenure, whereas a role-oriented institution could be the legal authority established to adjudicate disputes arising out of that land-tenure system. Both rules and roles can be institutionalized, the former as codes of law or custom, the latter as concrete organizations.

It is useful to keep in mind the distinction between these two types of institutions. Development assistance for agriculture is sometimes aimed at altering a rural society's fundamental rules, for instance by promoting tenurial reform and land redistribution. When practitioners seek to build better institutions, however, the role-oriented, organizational definition is usually what they have in mind. AID (1983, 2) makes this a matter of official policy, arguing that "because institutions become tangible only through the policies and actions of particular organizations, much of [our] institutional development effort will be focused on improving the policies and procedures of key organizations." This paper follows these conventions and, as mentioned above, restricts itself principally to institutions devoted to higher education and integrated rural development.

AID's focus on role-oriented, organized activities unfortunately introduces another point of confusion, since institutions in this sense can be used loosely to refer to any formal or semi-formal collective entity. But not all organizations are institutions, any more than all institutions are organizations. As Uphoff (1986, 9) points out, the distinguishing characteristic is a complex of norms and behaviors that persist over time by serving collectively valued purposes. Many rural organizations fail this test, and when one refers to them as

institutions it is often to speak hopefully about what they might become, and not realistically about what they in fact are.

What are sustainable institutions? Strictly speaking, the term is redundant since institutions are, by their very definition, sustained patterns of social organization. But as a practical matter, the development field has in mind collective entities that meet one or more of the following criteria: 1) they are able to recover some of their costs or even become self-financing, 2) they supply a continuing stream of benefits, and 3) they survive over time as identifiable units (IDMC/DPMC 1987). Whether these are sufficient or even necessary criteria of sustainability, however, is often left unclear.

AID's Bureau for Asia and the Near East has recently funded a study that has recast the phenomenon in systems terms, and proposed the following simple and widely applicable definition: "Sustainability is the ability of a system to produce outputs that are sufficiently well valued so that enough inputs are provided to continue production (IDMC/DPMC 1988, 10)." This definition adequately sums up what it takes for an institution to sustain itself. Those familiar with the social science literature will recognize the counterpart to the older notion of "institutionalization," which Huntington (1968, 12) defines as "the process by which organizations and procedures acquire value and stability." The important points to keep in mind are that institutions, properly understood, always serve one or more client groups, that to prevail they need to "keep close to the customer," to use private sector terminology (Peters & Waterman 1982), and that they become vulnerable when they fail to produce goods or services economically.

PAST RECORD OF SUSTAINABILITY

Most observers would agree that too few of the rural development organizations supported by international donors over the past several decades have sustained themselves and become institutionalized. But can a more precise figure be put on the problem? AID recently had 212 project evaluations reviewed from the perspective of sustainability. Twenty-six percent of the projects (all completed in 1985 or 1986) earned strongly negative ratings, 56 percent got marginal marks, and only 11 percent of the projects were considered to have strong prospects for being sustained after the termination of U.S. assistance (Devres 1987). Agricultural and rural development projects fell disproportionately into the least sustainable categories.

The World Bank did its own study of this issue, using a different methodology but coming to almost the same conclusion. The bank reexamined the impact evaluations done on thirty-one projects during 1979-1985 (twenty-seven of which were in the

agricultural sector) to determine how successful the projects were in keeping up their activities. Coming about five years after a project is ended, an impact evaluations is a better gauge of sustainability than a normal performance audit. The study concluded that a majority of the projects were either unsustainable (32 percent) or marginally sustainable (26 percent). Only 42 percent of the projects had successfully achieved sustainability (World Bank 1985).[4]

These two studies of sustainability help quantify the problem, but their findings make little sense without a point of comparison. The fact is that organizations always have high attrition rates, even in a developed country like the United States. No sector is immune. Consider, for example, the sustainability of commercial enterprises. A profit-making organization that provides insufficiently valued outputs usually goes out of business, and this happens with great frequency in the United States. The consensus among academics is that 65 percent of start-ups fail within the first five years (Shapero 1981), and few businesses (the Fortune 500 perhaps) ever attain the status and permanence that characterize institutions.

Not-for-profit ventures also face long odds. Consider the case of American colleges: of the 516 institutions of higher education founded in the U.S. before the Civil War, 81 percent had ceased to exist by the 1920s (Tewksbury 1965, 28). The same is true of voluntary associations, which are notoriously ephemeral, ebbing and flowing with popular preferences and needs. The history of the Grange, America's most notable farmers' organization of the nineteenth century, is illustrative. Following the first lodge's establishment in Washington, D.C. in 1868, more than 24,000 lodges formed over the next seven years. The peak year was 1875, but already some 5,000 lodges had lapsed into inactivity. Grange membership, which topped out at 450,000 during this period, shrank to 65,000 by 1880 (Nordin 1974).

The sustainability of public sector bodies is more difficult to determine, for poor service and dwindling clientele can be offset and masked by subsidies from general government revenues. Indeed, one of the leading gripes conservatives have about government is that its agencies and offices get sustained artificially. Being insulated from market competition, public bureaucracies can tolerate considerable inefficiency and lack of

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[4]It should be noted that the World Bank projects located in Asian countries were all classified in the most sustainable category, though the total number was so small (there were only eight projects) that this trend may not be significant. Other studies by the bank, however, estimate that the rate of return to projects in Asia is higher than elsewhere, so the proportion of sustainable projects may also be greater.

innovation, yet still survive. Nonetheless, they are not immortal. Kaufman (1976) has studied this question in the U.S. federal government. Of 175 administrative organizations extant in 1923, 15 percent had been terminated by 1973.

To summarize, American organizations--whether they be formal or informal, private or public, profit-oriented or charitable--have had to fight uphill to get themselves institutionalized. Obviously, none of these examples from the U.S. can be likened exactly to newly established or reconstituted organizations in Asia and the Near East today. Our own country's experience, however, does give a rough idea about the institution-building prospects in that region, whose recent accomplishments are probably more noteworthy than we generally admit.

Development projects are, it is important to remember, by definition high risk ventures whose outcome is impossible to forecast accurately; that they frequently prove unsustainable is inevitable. To the extent that projects represent policy experiments (Rondinelli 1983), some lack of sustainability is actually desirable for learning purposes. Moreover, there may be perfectly valid projects, particularly in the social services, whose clientele are so poorly endowed that donor subvention has to be continued indefinitely. In any case, the maturation of a project into an institution will usually take more time than the normal project funding cycle. None of these observations should be grounds for complacence about today's assistance strategy, but they do counsel for humility about whatever approaches are tried tomorrow.

IMPORTANCE OF THE EXTERNAL ENVIRONMENT

The social, economic, and political milieu that an organization confronts can range from being hospitable to being extremely unfriendly. Research finds over and over that sustainability is inversely related to the hostility of the external environment: Ceteris paribus, the less outside hostility, the more likely an institution is to be sustained.

External environmental hostility can be seen as having both direct and indirect characteristics. There are three important direct ones: how much demand exists for the institution's goods and services, are those goods and services private or public, and what socio-economic characteristics mark the institution's stakeholders? There are also three indirect dimensions of external environmental hostility: stability (or the rate of external change), flexibility (or the degree of openness to change), and the extent of environmental artificiality (in the

economic sense of not reflecting market prices or in the political sense of lacking widespread legitimacy).[5]

That friendly surroundings have salutary effects on institutions is hardly surprising. Consider first the direct influences--level of demand, type of good or service, and stakeholder characteristics--which often get lumped together as the problem of "country commitment" to a project (Heaver & Israel 1986). An excellent example of a set of projects whose immediate environment was benign, and therefore supported a lasting impact, was the agricultural university program in India, which got started with assistance from AID's predecessors in 1954. Domestic demand for these institutions was strong (though not universal) and the country had a pool of educated manpower to draw on for staffing them. Significantly, two of India's presidents and the home minister helped found the system (Goldsmith 1988, Lele & Goldsmith 1988).

After the Green Revolution raised the status of agricultural science, student interest rose. Because education is a private good for students (they benefit directly from their own learning and the personal contacts they make through school) the universities were able to draw sustenance from their alumni after graduation. Institutions find it more difficult to secure this sort of support when they provide a public good that permits "free-riding" (Olson 1965). The Green Revolution also primed the political pump for farm technology in India, helping to create new constituencies for the rural universities among farmers and politicians.

In the Indian university case the indirect external influences--stability, flexibility, distortion--were also unhostile. The country was politically secure, with widely legitimized public institutions. Though a conservative people in many respects, Indians were open to trying out innovations associated with the U.S. land-grant system of higher education, which they correctly associated with agricultural modernization.[6] After the mid-1960s, the external environment of these institutions also became less artificial, as Indian leaders adopted price policies that improved the general climate for farming.

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[5]For a more complete description of these concepts, see IDMC/DPMC (1988).

[6]This did not mean they were completely flexible and willing to change, for there was resistance from quarters that stood to lose influence if an exact copy were made of U.S. models. The farm extension service, for instance, retained its independence and was not taken over by the agricultural universities, as most American advisors advocated.

The new universities became thoroughly institutionalized as a result, though big gaps exist among the states due in part to the sort of climate they offer to higher education. Where educational leaders have been able to draw on a dynamic state agricultural sector, as in Bangalore, university performance has been excellent. Where circumstances are less favorable, as in a backward state such as Orissa, the university has had to struggle. In any case, the sustainability of these institutions is not AID's doing per se. The host country has always provided the preponderance of financial resources for agricultural higher education and was actively involved in all stages of planning. It is instructive what happened after India terminated AID support for these projects in the early 1970s, before they were finished, because of political frictions with the U.S. that culminated during the Second Indo-Pakistani War. On its own India continued to develop additional institutions, adding twelve more universities to the nine started with AID's help (Busch 1988).

Another example of an institutional development project for higher education that confirms the difficulty of achieving sustainability in a hostile external environment, comes not from Asia but from Africa. Starting in 1960 AID worked with Nigeria to set up several agricultural faculties, with the most ambitious project being a multi-purpose campus at Nsukka in the eastern part of the country. Primary conditions were favorable, with strong demand from many constituencies for AID assistance and wide interest in the land-grant university model. In fact, Nigeria's president (himself educated in the U.S.) played an active role in planning the new university at Nsukka, and later in its day-to-day management. He even made the campus a semi-official residence while serving as the country's chief executive.

The indirect outside influences, however, could hardly have been more hostile. There was little stability, the most serious manifestation of which was the civil war with Biafra that erupted only a few years after these projects got started. Soldiers invaded the Nsukka campus, forcing the U.S. advisors to escape and leaving the university closed for three years. The other U.S.-supported universities did not suffer as badly, but they were disrupted by the flight of faculty and students, and by the increased politicization of ethnic conflicts. Flexibility about how to structure higher education was also lacking in Nigeria. The Nsukka faculty in particular was tagged with partial responsibility for the war, which discredited the land-grant model and encouraged post-war leaders to remake that university along Oxbridge lines. Finally, the outside environment was marked by artificiality, as oil revenues made possible a flood of cheap food imports that undermined domestic agriculture.

Nsukka survives, but neither it nor the other Nigerian universities seem to have the vitality of most of their Indian

counterparts (Gamble et al. 1988)--despite the fact that the two sets of institutions got started at about the same time, with the same philosophy, and the same kind of donor support. The differences in institutional outcomes can be attributed in large part to the differences in Nigeria's and India's environments.

Regional development projects face similar challenges from their social, economic, and political environment. When external conditions are particularly inhospitable for implementing such projects (for example in Haiti), AID and other donors have sometimes opted for a "by-pass strategy" of going around the existing administrative system, on the grounds it is too corrupt or incompetent to be trusted. This may facilitate the achievement of narrow project objectives, but is not seriously intended to build an organizational and managerial capacity to carry programs forward on its own at a later date (Brinkerhoff 1988). The alternative of working with established institutions, unfortunately, often entails compromise on other development objectives, such as equitable access to project benefits. This dilemma is not easy to resolve.

IMPORTANCE OF THE INTERNAL ENVIRONMENT

An institution's internal environment can be just as momentous as its external one. The key issue here is the extent of inner complexity, a characteristic that is inversely related to sustainability. Organizations that use intricate technologies or have elaborate structures are often difficult to institutionalize. This fact has recently attracted attention in the private sector, where elaborate "matrix" planning systems and conglomerate administrative units have proven unwieldy, and given way to leaner, more focused corporations (Peters & Waterman 1982). Development institutions are subject to the same family of internal constraints, which have detracted from their sustainability.

The complexity of an organization's internal environment is a function of technology (the way it achieves practical purposes) and its structure (the way its roles, offices, and so forth are arranged). Technology is important because of the demands it puts on the staff and clients of the institution. Four characteristics seem particularly important: 1) Does the technology produce byproducts that spillover onto third parties and thus make it difficult for management to recover costs? 2) How frequently is the technology employed, and is its application variable or standardized? The answer affects the organization's "learning curve." 3) Are there economies of scale in the use of the technology? If so, the organization will have to be large, with attendant challenges of motivating and supervising the work force. 4) Does the technology give rise to so-called principal-agent problems, where the interests of its users diverge? Again, this makes the supervisory problem greater for management.[7]

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[7]For further details again see IDMC/DPMC (1988).

The structural dimension of internal complexity is important because of its effect on incentives, on the flow of information, and on the transaction costs of running the organization. Specific structural issues include: 1) the extent to which decisions are based on authority as opposed to exchange relationships, 2) the degree of organizational formality, 3) the extent of organizational hierarchy, and 4) the degree of centralization. Each of these affects how intricate the inner working of an organization becomes. And, of course, structure and technology interact with each other to further affect the complexity of the internal environment.

Internal complexity is probably the leading stumbling block for area development projects. The idea of coordinating the delivery of diverse services is attractive in principle, but inherently difficult in practice, particularly in the countryside with its characteristic material shortages, communication and transportation breakdowns, and other bottlenecks. Timely and accurate monitoring of the project's impact on farmers, laborers, women, children may not be possible. Many central governments, jealous of their own prerogatives, create ornate procedures for reporting and control that are a drain on everyone's time and add little to organizational output. Project managers have to bear a heavy administrative burden under the best of circumstances, and it often grows insupportable when outside resources are removed.

The classic solution to the problem of structural complexity is decentralization, which can take more specific forms of deconcentration, devolution, delegation, and privatization (Rondinelli 1981). The objective is always to bring authority to a lower level, to allow decisions to be made more quickly and with local realities more clearly in view. Whether decentralization can be sustained, however, will depend partly on the technology an institution uses (and on external environmental factors, too). There are more degrees of freedom, for example, to decentralize decision-making about tubewells than about large-scale irrigation works.

AID's regulations tend, inadvertently, to compound the complexity of all its projects. Close supervision and auditing, while needed to satisfy Congress' concern that taxpayer's money be used wisely, can make it difficult to build a streamlined and responsive management system (Rondinelli 1987). Among other things the high degree of formality increases the rules organization members need to learn and obey (or find ways or circumventing), with attendant demands on their time. The unintended consequence is often to undermine long-term institutional sustainability.

THE NEED FOR STRATEGIC THINKING

External and internal environmental conditions are largely given, and they strongly influence whether an institution can thrive over the long-run. Sustainability, however, is not rigidly predetermined by these factors. Development institutions usually have some leeway to modify their surroundings, to anticipate shifts in demand for their products or services, to engage in marketing to promote themselves, and to otherwise be "proactive" toward changes in the outside environment. Institutions usually possess even more control over internal conditions. Their range of choice is bounded, but they often have discretion about what technologies to use, what structures to set up, what procedures to follow.

These are each questions of organizational strategy. All organizations possess strategies--that is plans of action for achieving chosen objectives--though in poorly-managed ones, strategies tend to be implicit (Mintzberg 1978) or not taken seriously by members. Business leaders have recognized for more than two decades the contribution of strategy to long-term corporate survival (Andrews 1980), but the development community has become interested in organization strategy only recently (Paul 1982, Korten 1987). Studies of this issue indicate that to maintain themselves in the face of change, organized groups are helped when they set attainable, consistent goals, specify how they will run themselves, and agree on steps to be taken to reach desired positions. Scanning the environment and taking stock of the organization's inventory of special skills and other resources are crucial elements of this process.

The "best" strategy is contingent on an organization's strengths and weaknesses, on the goals and values of its management, and on perceptions of threats and opportunities in the environment. Strategic plans, which are obviously organization-specific, attempt to match these various internal and external elements in a sustainable pattern. To state the issue with the terminology introduced earlier, different combinations of external hostility and internal complexity call for different strategies to promote sustainability.

In the field of agricultural and rural development, a continuum of organizational strategies can be envisioned, stretching from "mechanical" on one end, to "interactive" on the other. A mechanical type of strategy, as its name implies, is to perform tasks in a routine, almost automatic way. There is little reflection on either the internal or external environments. An interactive strategy, by contrast, entails much thinking about environmental factors. Rather than emphasize standard operating procedures like a mechanical game plan does, it stresses learning

and adaptation.[8] (Mechanical and interactive strategies are poles that development organizations lean toward, of course, and not mutually exclusive courses of action they have to choose between.)

Mechanically-oriented strategies are generally easier to bring off because they rely so much on repetition and specialization. Mechanistic organizations can become very proficient at a limited range of tasks, something that Adam Smith first showed to be the key to high productivity. The downside, as Drucker (1985) points out, can be too much emphasis on "doing things right," and not enough on "doing the right things." This may not be a problem (and can often be an advantage) when the outside environment is benign or the internal organizational processes are simple. Part of the explanation for the longevity and growth of the AMUL dairy cooperatives in India, for example, may be that external demand for milk is stable, while the internal functions of milk delivery are repeated over and over (Uphoff 1986, 141-43). A somewhat mechanical strategy can work well under these special circumstances.

Interesting efforts have been made in recent years to apply a mechanical approach to aspects of development work where this has not been tried before. The idea has been to diminish internal complexity, for instance by tightening job descriptions and circumscribing organizational activities, to increase the probability that a project can sustain itself. The World Bank's Training and Visit (T&V) system of agricultural extension is the best example of these experiments (Benor & Harrison 1977).

T&V assumes that the fundamental need in extension services is to have a clearly defined organization and direct lines of authority. To meet this need, field workers are given narrow and specific responsibilities, targeted on agricultural production and purposefully excluding other functions such as credit and marketing. They work through local organizations and contact farmers, who are visited every two weeks, and they keep logs that permit close monitoring of their movement.

Staff training is intense, with village extension workers periodically instructed in discrete technical packages, which they promote for a predetermined time. The training helps offset the advisory workers' weak technical background, raises their status among farmers, and provides feedback to superiors about the acceptance of earlier recommendations. T&V is not a panacea for agricultural backwardness, but it has strengthened the extension

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[8]This distinction between mechanical and interactive strategies is similar to the "blue-print" versus "learning process" approaches to project management described by Korten (1980). There is no necessarily negative connotation to the mechanical approach, however.

services in several countries. Opportunities may exist for similarly breaking down the provision of other services to rural people (Israel 1987), especially if the outside climate is stable, flexible, and otherwise generally unhostile.

Most agriculturally-oriented projects, however, probably have too many external challenges to meet or too many internal complexities to master for them to sustain themselves through a mechanistic T&V approach. A more interactive strategy is called for. Higher agricultural education is a good example of a service that cannot be regimented and still be delivered in a way that satisfies consumer groups. Universities have to be able to respond to the demands of their outside constituencies, lest they be seen as irrelevant and not deserving support. Constant feedback and self-correction are essential to their sustainability.

It is instructive in this regard how much learning and adaptation has always gone on (often more by necessity than design) in projects for agricultural universities. American officials have usually favored a distinct model based on the land-grant pattern (Hannah 1966), which their foreign counterparts have invariably wanted to modify to suit their own needs. Prolonged collaboration, based principally on the international exchange of scholars, allowed the differing points of view to be accommodated, and is one reason these institution-building projects have done so well in sustaining themselves.

Rarely do high-level partnerships of this sort emerge or get used optimally (Ross 1988). Possessing their own priorities, and subject to arbitrary time constraints, donor agencies are prone to hastiness and rigidity, and they often needlessly antagonize officials in the host country whose cooperation is needed to build sustainable institutions (Cohen, Grindle & Walker 1985). These same officials have biases of their own, but they are also in the best position to understand national conditions and to appreciate what sort of institutional improvements are feasible. It is a mistake not to take full advantage of this national expertise.

Integrated rural development projects also tend to require interactive organizational strategies. The successful early experiments with this type of development, such as Etawah or Comilla, all learned-by-doing and kept in close touch with their clientele. Among the explanations for the limited ability of successor projects to sustain themselves is that planners and managers have held too many preconceived ideas and learned too little from project beneficiaries. This fact is at the heart of the arguments for greater people's participation in planning, for step-by-step implementation, and for tapping the energy and knowledge of local organizations (Esman & Uphoff 1984). When the "target population" sees a project as alien or imposed from the

outside, it is unlikely to contribute its own resources to making the project last.

IMPLICATIONS FOR DEVELOPMENT STRATEGY

Institutional sustainability is not always a feasible objective, nor even necessarily a desirable one for some projects. Insurmountable external and internal problems can terminate almost any institution. The odds for sustainability are improved, however, when an organization is able to adapt itself to its environment and to bring its operations in line with its resource endowment. Achieving a "fit" among these internal and external elements is the role of organization strategy.

While AID and other donors devote much energy to international and national strategy issues, they have tended to ignore strategy at the organizational level. The study and training of project management has focused on administrative functions, that is on the routine tasks of budgeting, accounting, procurement, and so forth. Relatively little attention has been given to the entrepreneurial dimension of management, that is to the nonroutine job of strategic planning and implementation.

The entrepreneurial function is well-known in the private sector, but as Schultz (1981) points out, it contributes importantly to the building of agricultural institutions in the public sector, too. A public entrepreneur is someone who starts or elaborates a public organization and alters significantly the existing pattern of allocation of public resources (Lewis 1980). It is increasingly evident that creative leadership of this sort is a major ingredient in the development of sustainable institutions.

The development field, to the extent it deals with public entrepreneurship at all, often misinterprets it as solely a matter of charismatic leadership and therefore as something unique and non-duplicable. Certainly the more flamboyant, daring aspects of entrepreneurship cannot be taught and repeated. Strategy formulation, on the other hand, is a transferable skill. For AID to increase the probability of institutional sustainability in the 1990s it needs to rethink its approach to management training and to project design, to put greater emphasis managerial choice, on developing strategies at the organizational level, on evaluating environmental conditions realistically, on anticipating change, and on not overreaching institutional limits. This would not guarantee institutional sustainability, but might improve the chances that any given project would continue to provide benefits after AID funding runs out.

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