

The ILL-IAD: An Essay On Integrated Area Development (IAD)

BRUCE KOPPEL*

The Philippine National Development Plan (1978-1982) states that the regional plans would be implemented through the mechanism of integrated area development (IAD) programming. This linkage of IAD to subnational planning and development efforts makes IAD Philippine version significant. There are different assumptions and models motivating the different versions of IAD programming. These assumptions, which are actually axioms, include urban functions, access to innovation and exchange, assimilation, optimal resource use, coordinated functional inputs, and decentralization. Each of these axioms involves the issues of development definition, equity and sustainability. Also, IAD programming differs with the procedures in non-IAD settings. All these issues focused on the equity policy affecting poverty which the IAD confronts as the main tool for implementing the Philippine regional plans.

Introduction

The Philippine experience with integrated area development (IAD) is proving to be an instructive exercise in the political limits on administrative ingenuity.¹ While integrated area development as a rural development strategy had periodically gained and lost favor in some circles before it appeared in the Philip-

pinas, the current Philippine version is significant because it represents a thoughtful attempt to link integrated area development programming to a systematic subnational planning and development effort. Earlier Philippine integrated area development efforts generally were not linked in any regular fashion to existing or evolving subnational administrative structures. More often, they were national programs with idiosyncratic and even unusual administrative arrangements. In Southeast Asia, the Philippine attempts to regionalize, while not yet yielding many visible accomplishments, can still be considered as potentially significant administratively and political-

*Food Systems Program Leader, East-West Center Resource Systems Institute, Honolulu, Hawaii, U.S.A.

¹A distinction between integrated area development as a rural development strategy and IAD as the area covered by the strategy is maintained in this paper. ILL-IAD refers to both the concept and area covered by the strategy.

ly. By making integrated area development the principal mechanism for moving from regional plans to the spatial allocation of public investment resources to implement the plans, the Philippine case bears examination.

This essay focuses on assumptions and models motivating different versions of integrated area development programming in the Philippines. The examination of the ILL-IAD, like the more well-known Illiad, will include visits to treacherous domains, which include development definitions, equity assumptions, perspectives on sustainability, and data base dynamics. While specific Philippine IAD programs may have only limited generalizability, even among the diverse regions of the Philippines, the types of programming and their relationships to institutionalization and equity issues are not limited to the Philippines.

What is Integrated Area Development?

The Philippine experience with integrated area development predated the intensive discussion within Philippine planning and administrative circles of what integrated area development is. The Bicol River Basin Development Program (BRBDP) was the nation's pilot program in area development. Since its initiation, other nationally supported development programs have been implemented, usually under foreign funding and commonly formed around large-scale infrastructure programming. The Coordinating Council for Integrated Rural Development (CCIRD) provided a measure of cabinet level coordination for these early efforts,

but real leadership typically came from the line agency with the appropriate functional mandate, for instance, irrigation.

The 1978-1982 Philippine National Plan stated that the regional plans, the basic intersectoral component of the document, would be implemented through the mechanism of integrated area development programming.² The National Plan indicated that the integrated area development concept was going to be the vehicle for matching the regionalization process then underway in planning to a pattern of subregional resource allocation. Perhaps the major innovation was that the National Economic and Development Authority (NEDA), until then the planning agency which had principal responsibility for drawing up the regional plans, was being given the role to coordinate the identification, establishment, and implementation of IADs. For both administrative and programmatic reasons, a search for operational integrated area development definitions was thus initiated by regional staffs, in general, the NEDA Regional Offices (NEDA ROs), in particular.

At the outset of that search, the tendency was to identify IAD types based on existing area-specific national programs. Similarly, IAD delineation criteria were based on the mixture of regional economics, resource geography, and administrative common sense that explained the spatial boundaries of existing area development programs. Four types of IADs were typically identified:

²Philippines (Republic), *NEDA Five-Year Philippine Development Plan 1978-1982* (Manila: September 1977), pp. 58-60.

(1) *River basin*. This was the clearest intuitive example of integrated area development. Area definition, linkage of problems, and interconnection of solutions are all tied together around hydrological linkages.

(2) *Central place*. Cited almost as often as river basins, the central place IAD could be linked to several aspects of rural development experience in the Philippines, especially community development, and the farm-to-market roads program. Area identification and development are derived from patterns of economic growth attributed to a market center.

(3) *Administrative-political*. This type of IAD referred to experience with provincial development, especially through the American-supported Provincial Development Assistance Program (PDAP) as well as memories of the pork-barrel resource allocation process tied to Congressional districts in the days before the declaration of Martial Law (21 September 1972). The key is integrated area development as a mode of program development and project implementation by existing administrative units.

(4) *Contiguous Area*. This is an IAD type that reflected the view that there was little difference between current sectoral programming and IAD programming. Where the first three types yielded delineation criteria, this type tended to reflect some cynicism about the differences between IAD and prior regional and rural development 'fads,' most of which already had explicit spatial components.

Discussions of IAD delineation crite-

ria typically generated four major criteria:

(1) *Homogeneity*. This metaphorical term was commonly used but rarely defined. At best, discussion might raise the issue of what needed to be homogenous to facilitate efficient intervention by development agencies. Usually listed were factors such as culture, land use, land capability, and socioeconomic structure.

(2) *Contiguity*. This was a recognized necessary condition for IAD delineation—a single area, spatial contiguity.

(3) *Nodality*. An IAD was seen as needing some nodal point around which development proceeded and through which integration occurred. Sometimes, nodality was described functionally (for example, irrigation systems); sometimes spatially (for example, roads); and sometimes spatial-functionally (for example, central places).

(4) *Political-administrative feasibility*. This was not as widely accepted at the outset as one might believe. It basically said that any integrated area development definition had to be tested against the question of where administrative capacity to implement could actually be found.

That question was reducible to a debate between the NEDA ROs and the line agencies. The NEDA ROs focused on extending the administrative capacities of existing local government units (for example, provincial and municipal governments) as well as themselves. The line agencies often argued for capacity

which needed to be created (for example, the special river basin authorities) but usually within the line structure of a national agency.

The type and delineation criteria did not constitute a framework that very many people could use to guide project identification or suggest even how success and failure of an IAD might be distinguished. Moreover, the criteria generated considerable discomfort with the whole integrated area development idea. At least three problems were involved:

(1) The criteria were inconsistently and imprecisely defined and used.

It was natural for people to relabel a variety of existing programs and approaches on the assumption that the bottles were changing, not the wine; for example, the concept of planning areas was relabeled as planning for contiguous areas. That translation is possible, but many recognized that it led to an IAD definition that was problematic. Since NEDA RO planning areas were entire regions, of which there are only twelve in the Philippines, could an entire region be an IAD? If the IADs were to be subregional, then what was the basis for defining subregions? Homogeneity was a case of a metaphor which lacked precision. "Sameness," however defined, was very sensitive to the size or scale of an area under consideration. "Homogeneity" could be relatively precise at the *barangay* (a village as a local government unit) or even municipal level. At higher levels of aggregation, however, what could be identified as a "sameness" characteristic was often so general, it could very easily apply to very large areas of the country. In fact, a

counter proposition arose to the homogeneity criterion: integrated area development as the functional merging of different parts of a subregional socioeconomic system. From that perspective what was there left to integrate or merge if the IAD was homogeneous? The central place criterion was another example of misleading precision. While most agreed that area development could better work under the stimulation of a growth center, there was surprisingly little careful discussion of how one identified growth centers or developed central places into growth centers.

(2) The relationship of IAD criteria to regional goals was inadequately discussed.

The proposition in the national plan that IADs were the spatial disaggregation of regional plans proved difficult to implement. One reason was that, in most cases, the regional plans had not been developed on the basis of prior subregional analysis that could be easily transformed into IADs. Attempts to map regional planning goals across a region generated a host of issues, including intraregional equity, uneven growth rates within the region, and the varying subregional effects of region-wide structures and processes, such as migration, market systems, and transport systems. For most of those issues, there were few supporting subregional data bases.

(3) The criteria were better at grouping existing national IADs than selecting NEDA RO IADs.

Attributing homogeneity to an already identified IAD was not that difficult. Very often the homogeneous character-

istic was being in the IAD! Using homogeneity to fix new boundaries was very difficult. Similarly, an IAD that already existed could be called a central place IAD without causing too much discussion. It did not follow that an IAD could be drawn around every market town in the Philippines. Even the land-use criteria were not as helpful as might be expected. Much of the catchment, drainage, and watershed areas of a river basin can be understood in terms of the basin ecotype. How much, however, is better understood in terms of other ecological distinctions? In fact, the national river basin IADs had their share of administratively and politically defined boundaries. An example is the nation's premier area development program, the BRBDP which was expanded to include the Province of Sorsogon, well outside the Basin ecological influence area. Consequently within NEDA, the search continued for a more satisfactory IAD definition and the following was adopted:

Integrated area development is strategic intervention in a sub-regional system seeking to enhance the integration of programs and projects in an area by considering functional linkages, resource utilization, access to basic services and local participation in the planning and implementation process in a manner consistent with national and regional goals and objectives³

This definition did represent some progress. It indicated what integrated

area development is by focusing on what government does in an IAD. Three delineation criteria were suggested: contiguity, functionality, and political-administrative feasibility. The functionality criterion represented a restatement with modifications of the nodality criterion. "Functionality" meant that "the area should be conceived in terms of strategic sectors and the linkages of those sectors with relatively advanced and depressed parts of the economy." "Linkages" were defined in terms borrowed directly from functional economic area analysis, namely: location of markets and major economic activities; traffic flows of goods and people; sources of inputs for agriculture and other economic enterprises, and location of product markets. The strong emphasis on the coordination of government programs was a reference to an administrative desideratum. *Masagana 99* and related rice production programs in the Philippines confirmed the belief that the basic developmental challenge consisted of mobilizing and coordinating diverse government programs.

The Integrated Area Development Axioms And Integrated Development

Despite the NEDA definition, several alternate definitions of integrated area development remained. These were definitions that reflected different understandings of "integrated area development" as: (1) resource allocation process, (2) interorganizational coordination process, and (3) socioeconomic change process. Very often, the term which dis-

³Jose M. Lawas, "Concepts and Strategies of Rural Development," in Dionisia A. Rola (ed.), *Integrated Rural Development: Problems and Issues* (Quezon City: Management Education Council, University of the Philippines, 1981), p. 21.

criminated the various definitions was not "area." Arguments about delineation criteria help up discussion at the outset, but it soon became clear that the meanings and understandings attached to "integrated" were the hurdle. This followed from the more practical programming orientation of most of the people participating in the discussion. They were less concerned with the "where?" question (the answer to which they increasingly viewed as academic) and more concerned with the "how?" question. Given the limited implementing power of NEDA and its NEDA ROs, this was not a surprising development.

It is possible to identify several assumptions about "integration" in the form of statements that are really axioms of the following type:

Integration occurs around some principal criterion X, is manifested in Y spatial and Z functional terms, and implies as the principal delineation criterion, N.

Six generic integrated area development axioms are presented in Table 1. While the six axioms do not necessarily correspond to all the empirical IAD types in the Philippines, most if not all existing and prospective IADs are a mixture of the axioms. By identifying the axioms, it is possible to gain a better understanding of different perceptions of IAD dynamics as well as to explore the implications of mixing axioms to create empirical types.

The first three axioms (Urban Functions, Access to Innovation and Exchange, and Assimilation) are different versions of central place strategies. The

fourth and fifth axioms are different approaches to what may be called the "induced innovation paradigm," with the Optimal Resource Axiom emphasizing innovation" and the Coordinated Functional Inputs Axiom emphasizing "inducement." The last axiom is not a specific proposition about integration, but rather an assumption that whatever integration is, it requires a significant degree of self-determination by those being integrated.

The Urban Functions Axiom has been elaborated by Rondinelli and Ruddle and earlier by Johnson.⁴ It is the core central place axiom, equating area development with the number and type of urban functions present. "Integration" essentially consists of trade linkages among concentrations of urban functions. The major policy theme in an IAD based on Urban Functions is concentrating investment on the development and accumulation of urban functions. Area delineation will be based on growth center or "hierarchy-filling" criteria. The criteria are derived from comparative analyses of developing urban hierarchies. That analysis indicates where and at what levels of complexity specific hierarchies have gaps in the presence of specific urban functions. The assumption is that gaps in the urban hierarchy interfere with the efficient transmission of market signals

⁴Dennis A. Rondinelli and Kenneth Ruddle, "Appropriate Institutions for Rural Development: Organizing Services and Technology in Developing Countries," *Philippine Journal of Public Administration*, Vol. XXI, No. 1 (January 1977), pp. 35-52 and E.A.J. Johnson, *The Organization of Space in Developing Countries* (Cambridge, Mass.: Harvard University Press, 1970).

Table 1. IAD Axioms

Integration Around	Spatial	Functional	Basis for Area Delineation
Urban Functions	Spatial hierarchy of service areas; Physical access patterns which facilitate urban access to periphery	Functions operating with agglomerative and scale economies; Complex infrastructure; Technology/innovation centered or linked to higher sources of technology generation; Rationalized labor market	Service area of urban function concentrations; Geographic nodality
Access to Innovation and Exchange	Physical proximity to innovation and exchange; Locational balance in branch/linkage functions	Access to exchange system and diffusion of innovation; Broader opportunity structure; Reduced role of mediating structures	Influence area of improved or developed resource base and/or central place service area
Assimilation	Breakdown of spatial barriers	Overcoming/correcting marginal status by extending growth system to by-passed areas; New cultural linkages	Distinct differences in land use, land capability; Cultural forms in <i>conjunction with</i> very limited exchange
Optimal Resource Use	Full utilization of scarce land/water resources	Factor combinations optimal; Appropriate institutional arrangements to relieve effects of population pressure, technological change and exhaustion of land frontier	Contiguous area characterized by economic and resource base common problem/opportunity
Coordinated Functional Inputs	Services allocated intensively within administrative areas	Optimal combinations of planning and implementation inputs to support/induce local innovation and increased production	Administrative service area
Decentralization	Decision-making and goal determination within viable local government area	More effective local resource generation and utilization with local goal setting/participation in allocation of extralocal resources	Local government service area

and hence the efficient allocation of economic resources. Primacy ratios are the usual starting point for this type of analysis; the conclusion that there are too few intermediate centers is the usual outcome. A series of urban hierarchy studies completed by the Human Settlements Commission and NEDA in the mid-1970s provided the first stage in this type of analysis for the Philippines.

The Access to Innovation and Exchange Axiom equates area development with higher levels of technology (or innovation) acceptance and reduced variance in market signals. "Integration" means "sustained linkage to support existing technology as well as broadly distributed possibilities of recognizing and using innovations." The major policy theme in an IAD built around the Access to Innovation and Exchange Axiom is using infrastructure and institutional programming to increase access to technology. Area delineation will be based in part on the location and influence areas of central places, but more interesting delineation possibilities arise in relation to two aspects of this axiom. The first is the axiom's focus on resource base enhancement (e.g., irrigation) as a form of nodality. In strategic terms, this means that improving the resource base can be growth stimulating in a manner quite similar to direct investment in the improvement of central places. Market signals, trade relationships, and resource utilization are all rationalized and the diffusion of innovations accelerated; for example, IADs were defined around irrigation, roads, and rural electrification projects. In each case, the developmental process expected to operate was that these

projects would encourage forms of technology diffusion and economic exchange more consistent with the development of commercial agriculture and the diversification of economic activities.

A second aspect of the axiom is an assumption which can be called "the problem of equity as a problem of functional handicaps." This assumption says that relatively lower levels of technology use and innovation acceptance are due to some type of functional constraint, such as high transport costs. Correcting the handicap "restores" the technology diffusion process. Delineation of an IAD in this axiom represents a spatial statement of the functional bottleneck. Not surprisingly, the typical solution looked for (and found) is physical infrastructure. In other words, functional bottlenecks are broken by spatial interventions. Almost any International Bank for Reconstruction and Development (IBRD) irrigation or road project appraisal report illustrates the more general logic of this axiom and the sometimes cornucopic benefits expected. Most of the early IADs in the Philippines were outcomes of the Access to Innovation and Exchange Axiom.

The Assimilation Axiom directly equates area development with integration—where "integration" means "the reduction of marginality and isolation." The major policy theme in an IAD built on the Assimilation Axiom is expanding the scope of linkages connecting center and periphery. Area delineation can be based on a range of indicators which show that a particular area has been bypassed, is outside the mainstream of in-

novation, is depressed, lagging, and so on. The difference between access and assimilation is crucial. The Access to Innovation and Exchange Axiom assumes consensus on values and goals. The Assimilation Axiom recognizes the reality of value and goal plurality, but seeks to overcome it. Consequently, the Assimilation Axiom will look beyond economic factors to cultural and ethnic characteristics that more fully describe marginality. Integration thus becomes a question of incorporation and, sometimes, imposed consensus.

The Optimal Resource Use Axiom equates area development with an "optimal" pattern of factor combination. "Integration" is "the functionality of the institutional context within which factor choices are made." If institutions are "right," the appropriate factor choices will be made. The major policy theme in an IAD built on this axiom is reducing distortions in factor-price ratios, principally through policies which influence the rate and direction of factor saving institutional and technological innovations. IAD delineation will be based on the interaction of three broad criteria: population size, existing market structure, and the status of actual and potential resources. The interaction of population with resources usually takes the form of shadow prices for farm labor. "Market structure" refers to "conventional support and service functions," but it also refers to "(1) contractual arrangements which organize access to factors (e.g., tenancy and farm labor arrangements) and (2) the system through which technological innovations are generated and disseminated." The "status

of resources" is essentially "the marginal value of those resources for different levels of utilization." The functional problem in an IAD based on the Optimal Resource Use Axiom can thus be stated: identify the institutions or policies that distort resource use away from the economically optimal and take steps to correct those institutional or policy causes.

The Coordinated Functional Inputs Axiom is the predominant axiom in the Philippine integrated area development discussions with the major thrust of the debate on how IADs can be institutionalized having always been a discussion of the relative powers of the national line agencies, the regional development councils (RDCs), the NEDA ROs, and so on. The focus of this axiom is not on how to bring new individuals into decision-making arenas, but rather how to ensure that the individuals already there work in some harmony. An IAD developed from this axiom will not be directly concerned with area development but rather with administrative productivity. "Integration" will not refer to the IAD as such, but to "the resource allocation patterns of agencies programming within that IAD." An IAD generated from the Coordinated Functional Inputs Axiom will pay special attention to existing political and administrative boundaries. Political and administrative feasibility will be major themes because the major policy is coordination of various political and administrative entities. The emphasis on coordinated inputs is a direct outgrowth of the integrated rural development movement. The focus is on the innovative administration of development. That is because what is being

coordinated is the efforts of diverse government agencies to perform within an IAD. "Administrative capabilities" therefore become crucial indicators of IAD success, along with "political commitment from the center" to support coordination at the IAD level. In some quarters, this axiom has led to concern for greater degrees of local participation. This follows from the belief that local organizations may be a more efficient way to focus outside efforts from many agencies.

The Decentralization Axiom refers to "the scope of local decision-making about what an IAD program will be, who will implement it, and how it will be funded." The broader the scope, the more "integrated" the IAD. Area delineation will tend to follow political or administrative boundaries since participation is occurring within existing political structures. In the Philippine context, this axiom raises interesting questions about how subregional and regional priorities are to be traded-off; how appropriate mixes of productive and social projects can be reached; how financial responsibilities can be apportioned, and, in general, how the substance of institutional arrangements facilitating local decision-making can stay within shouting distance of the form of those arrangements.

Few existing or proposed IADs in the Philippines correspond to any single axiom. A mix of axioms is the rule, although the combinations are not always compatible in terms of impacts within specific sub-regional areas; for example, in Region VI (Western Visayas), most

of the IADs being proposed are based on a mix of two data bases. The first data base was developed for a study of trade hierarchies. The second was an intensive land classification inventory incorporating data on slope, cropping system, and climate. The IADs generated were defined by criteria drawn from growth centers and homogeneous land use zones. Functionally, two complementary axioms were brought together—urban functions and access to innovation and exchange. In some of the IADs, especially in the upland areas of central Panay, a third axiom is present—Assimilation. This is an approach to integrating upland and lowland economies. The Assimilation and Access Axioms are similar, but there is one crucial difference. The Access Axiom assumes that the terms of broader participation in the political economy of the region are not fundamentally disputed by those already participating (lowland) and those being inducted (upland). Barriers to "normal" economic relationships are themselves economic rather than cultural, social, or political. The Assimilation Axiom starts from the premise that "normal economic relationships" will not emerge essentially because of non-economic factors which stratify populations, sometimes quite rigidly and impermeably.

In Panay, there may not be significant fundamental differences in perceived terms of induction and benefit distribution. The combination of the same axioms in Mindanao's Region XI (Southern Mindanao), however, where differences are present and are expressed in terms of ethnic, as well as edaphic characteristics, should be a source of genuine

concern. It means, for example, that application of Access Axiom strategies may well lead to results that are counterintuitive to the axiom's logic. The juxtaposition of spatial and ethnic marginality is a complex problem for IAD programming, particularly if the attribution of marginality is, in fact, the center's term for the periphery, but not the periphery's term for itself. In the Region VI (Western Visayas) situation, the Access and Assimilation Axioms may be compatible in the sense that stratification based on edaphic characteristics is recognized and addressed. In the Region XI (Southern Mindanao) type of case, the two axioms together may do little to reduce the existing level of violence and dislocation. Ethnic differences and the significance of those differences will not be reduced but instead may be sharpened by spatial assimilation. In effect, assimilation may occur without access, as the marginal ethnic group is more directly exposed to the power of other ethnic groups. If attempts are made to increase the marginal ethnic group's access to valued socioeconomic goods, the marginal ethnic group will be placed in conflict with groups at the lower end of the social scale in the dominant ethnic group.

Another very interesting example of a combination of integrated area development axioms is the now commonly advocated marriage of the Coordinated Functional Inputs Axiom with the Decentralization Axiom. A case in point for the Philippines is Region VII (Central Visayas). If decentralization proceeds to the degree some urge, regional authorities would have significant formal

influence over what inputs are available and how those inputs are allocated. It is important to note that this is decentralization from the center to the region. It is *not* decentralization to the IADs, although it can properly be viewed as a step in that direction. If, however, budgetary reforms making it possible for regional authorities to actually play a greater role are not forthcoming, then decentralization will be empty. In Bohol, an island within Region VII (Central Visayas), an IAD and associated functional inputs (irrigation) were planned nationally with only marginal inputs from the region. The National Irrigation Administration might make its usual attempts to organize operations and maintenance through farmer irrigator associations. The Ministry of Agriculture, through the Masagana 99 program, would allocate credit and technical inputs. Where is the scope for substantive input from people living within the Bohol IAD or even from regional decision-making entities? What is the Bohol IAD other than an irrigation service area? From the perspective of the Coordinated Functional Inputs Axiom, *where* administrative capacity is being built is an important issue because the answer structures the coordination problem. From the perspective of the Decentralization Axiom, *for whom* administrative capacity is being built is the important issue because the answer structures whose interests such capacity will serve. If there is only form, the basis for more substantive decentralization may be weakened. If the possibility for local assumption of project responsibilities is weakened, then the foundation is laid for

"vertical" competition between line agency efforts. In this context, coordinating functional inputs can suppress competition not only among line agencies, but also between line agencies and local organizations.

The IAD Axioms And Equity

Among the reasons for the adoption of an integrated area development approach to project selection and spatial allocation are judgements that:

(1) the pattern of often uncoordinated project by project development has reinforced spatial agglomeration tendencies, sometimes leading to redundancies and duplication, and ignored (often at the price of project failure) the actual interrelationships of functional and spatial dynamics in project influence areas, and

(2) the recognition that translating regional plans into sub-regional investment programs has proven difficult because when achievement levels for regional goals are mapped spatially across a region, an imbalance appears. These judgements share a common thrust: *a concern for equity in the pattern of development.* "Equity" can, of course, have many meanings. In the regional plans, the meanings include "surpassing income poverty lines, decreasing unemployment, an assortment of social indicators (such as health and education) and access to various public services." Whatever the definition in the plans, the integrated area development approach touches equity at several points, including area delineation, assumptions about the "problem," and the dynamics of "in-

tegration."

In Table 2, the IAD axioms are profiled in terms of each axiom's concept of equity.

The Urban Functions and Access to Innovation and Exchange Axioms define "equity" in similar terms: sharing valued social benefits through the possession of skills highly valued by the market. For the Urban Functions Axiom, equity is associated with occupational mobility out of subsistence agriculture. Supporting that kind of occupational mobility requires proximity to a concentration of urban functions. Critics of the Urban Functions Axiom point out that while urban functions may encourage occupational mobility, they do not necessarily do that on a spatially contiguous basis. In other words, urban functions may do more to encourage urban-urban and rural-rural occupational mobility than rural-urban occupational mobility. Advocates of the Urban Functions Axiom respond with a corrective strategy that proposes more urban points; a broader dispersal of urban functions that makes the urban hierarchy more orderly, viable and, hence, capable of modernizing rural hinterlands more rapidly. IADs built on the Urban Functions Axiom will pursue an equity strategy that allocates projects disproportionately to what are thought to be growth-centers. In some cases, the surrounding rural areas will be unaffected. In other cases, they may show the signs of disorganization associated with the extractive elements of an urban functions strategy.

The Access to Innovation and Exchange Axiom pays more attention to spatial linkages, arguing that those are

Table .2. Integrated Area Development Axioms And Equity:
Profiles of Assumptions

If IAD Axiom is	Equity Will Mean	
	Spatially	Functionally
Urban Functions	Proximity to urban functions	<i>Participation</i> in urban occupations; implicitly non-agricultural
Access	Proximity to diffusion points and/or dispersal of diffusion points	<i>Participation</i> via market value skills and attributes in technology diffusion
Assimilation	Physical linkage to formerly non-accessible area/center	<i>Acceptance</i> of center goals and assimilation terms of reference
Optimal Resource Use	Physical proximity to market and technological support	Functional <i>access</i> through appropriate institutional arrangements (scarce factor saving) market access
Coordinated Functional Inputs (CFIs)	Location in client area	Resource endowment compatible with aggregate high- payoff to delivery system; CFIs <i>utilization</i>
Decentralization	Decision-making concentrated in or near major market center of the IAD	<i>Participation</i> in goal-setting decision-making, control over local resources or resources generated locally.

necessary underpinnings for functional linkages. Occupational mobility out of subsistence agriculture is restated as commercialization or agricultural modernization. Poor subsistence farmers become poor commercial farmers. Access strategies will focus heavily on infrastructure (roads, irrigation, storage, and so on), but will be characterized by a well documented liability: functional marginality often remains a stubborn remnant even in the face of substantial spatial linking.

Equity in assimilation motivated IADs is being assimilated. The issue is: On whose terms does assimilation occur? Assuming some disorganization is inevitable, the equity strategy in the Assimilation Axiom is softening the negative impacts of change on those being assimilated. The results have not always been encouraging. One example is the failure to adequately consider complex land ownership issues in upland areas as one property system replaces another. This has led to loss of usufruct and even dispossession of upland cultivators. Another example is the tendency to view slash-and-burn agriculture as criminal behavior. This has created an air of mistrust and suspicion, especially when placed against careless granting of logging rights to lowland interests. A third example, perhaps most revealing of the cultural hubris that is often essential to this axiom, is the belief that marginal groups are either unorganized or characterized by "inferior" organization. "Equity" in this axiom is sharing the pursuit of a common set of "goods," adhering to a common set of rules about how to pursue those goods, and accept-

ing an authoritative set of expectations about how such goods will be distributed.

For the Optimal Resource Use Axiom, equity is seen as a characteristic of functioning (and therefore functional) institutional arrangements. When institutions are efficient, the pattern of factor choices will yield "just" economic rewards. Technological change and the exhaustion of the land frontier are two key factors which can significantly alter what are defined by this axiom as optimal resource utilization patterns. What can also be significantly altered are the optimal institutional arrangements for organizing the resource utilization process. Equity in this axiom is closely tied to neoclassical economic assumptions about efficiency. The axiom essentially denies that economic efficiency can be associated with institutional arrangements that are exploitative or, in some non-economic sense, "unjust." Consequently, the axiom defines equity strategies as basically compensatory steps which "return" a system to some naturally efficient (equilibrium) state. The axiom has been criticized for ignoring the significance of landless labor and highly segmented rural labor markets. In some instances, the criticism is deflected through arguments based on economic efficiency. In a few recent cases, there is concern expressed about rural polarization, but the concern does not lead to conclusions at variance with the axiom. Finally, the axiom discounts the role of unevenly distributed political power in rural areas as an explanation for why some institutional arrangements survive.

The Coordinated Functional Inputs Axiom is the axiom that will generate most Philippine IADs. The success of the Masagana 99 program in increasing rice production, and the successes of similar approaches to administrative mobilization and coordination have given this axiom the status of conventional wisdom. Operationally, this axiom needs success in the short term for coordination in functional input provision to occur. Without success, it is difficult to sustain interagency coordination. Programs will concentrate on those areas and those problems where intervention is not too complicated, client acceptance not too problematic, and positive overall results most likely in a relatively short period of time. Program objectives will not be complicated. Programming will often focus on a single project and one agency will have clear hegemony. The emphasis in area and client selection tends to be on what are called "early adopters." It is assumed that "natural" diffusion processes will carry the innovations from there. Intervention, therefore, is high-payoff and low-risk. Equity is linked to "natural" diffusion processes; for example, if demonstration farmers get higher yields and do not lose money, it is assumed that remaining farmers can successfully reproduce that performance. The Coordinated Functional Inputs Axiom has a strong tendency to confuse administrative productivity for social change. That confusion easily persists when the clients of a program are already doing relatively well.

For the Decentralization Axiom, "equity" is defined in terms of local self-management and control. The defini-

tion of "local" usually means "at the regional level" although some proponents of this axiom aspire to an IAD-level application. Assuming the latter, that would mean in practice IAD-based bureaucratic leadership, not popular participation in decision-making. There are several ambiguities in this axiom; for example, decentralization may be inconsistent with local control if resources are unevenly distributed. It means that poorer sub-regions have the privilege of staying that way under their own control! In such cases, the issue is not control over a local resource base, which may be quite meager, but rather how transfer mechanisms can be established which position IAD level control, relative to sub-IAD level control, such as municipalities or villages, and regional control, between IADs. It is important to recognize that decentralization at one level can freeze an existing stratification arrangement at a lower level that may be inconsistent with equity based development.

In a summary of several years of comparative research, Adelman *et al.* conclude that the relationship between the level of economic development and poverty is nonlinear; that virtually any structural change in an economy "tends to increase poverty among the poorest members of the population" with the breadth of that impact mediated by factors, such as population growth, migration rates, landholding arrangements, employment, and the scope of extended family responsibilities.⁵ Each of the axioms can accept the proposition that

⁵I. Adelman *et al.*, "Policies for Equitable Growth," *World Development*, Vol. IV, No. 8 (August 1976), pp. 561-582.

economic growth and equity are not related in a linear manner, but in all cases the compensatory strategy, if any, is *more* of the dynamic which is the core of the axiom. The dynamics are not questioned since to do so would be the same as questioning the axiom itself. There is no falsifiability of axiom propositions. These are axioms, not hypotheses; thus, if urban functions tend to agglomerate and cause uneven growth problems, the solution is to disperse more urban functions. If the benefits of improving a resource base tend to be systematically concentrated among a relatively few, exploit the resource base more thoroughly. If assimilation causes dislocations, then assimilation needs to be more complete. If factor markets are associated with resources which are not being used optimally by agricultural producers, take steps to ensure that factor markets operate more thoroughly. If coordinating functional inputs display uneven results with benefits accruing to the better off, intensify the coordination.

IAD Axioms, Institutional Issues, and the Question Of Sustainability

What integrated area development may be as a conception of development or as equity policy, it has administrative implications. Consequently, a number of institutional issues must also be considered. Some of the most crucial institutional issues are well recognized including questions like the following:

(1) What should be the relationship between IAD delineation and existing administrative and political boundaries?

(2) If IAD delineation yields an area

not directly and entirely covered by any existing politico-administrative unit, what distinct institutional arrangements, if any, should be developed? For what portions of the planning-implementation cycle?

(3) What should be the roles of various levels of political authorities and line agencies in various phases of the IAD planning and implementation cycle?

(4) Is IAD delineation a one time exercise or should delineation be a periodic requirement with different institutional options at each delineation?

(5) What degrees of autonomy should IADs have and how should IADs be institutionalized to ensure control is linked to accountability?

(6) What is the relationship of IAD development to different levels of planning, appraisal and implementation skills existing at various levels within a region?

These questions are not easily answered. The main reason is that in the Philippines the institutional and administrative context within which IADs are to function is itself in flux. The possible local political roles of the National Parliament, the impact of local government elections, the creation of the National Council for Integrated Area Development (NACIAD) chaired by the President of the Philippines, the unfolding reforms in the national budgeting process, and the unique role of the Ministry of Human Settlements are all examples of factors which directly influence the specification of institutional issues in IAD development. One institutional issue that can be exposed through exam-

ination of the six IAD axioms is the issue of sustainability. It is surprising that this issue rarely arises, because in institutional terms, this is *the* feasibility issue.

Reviews of integrated development programs in recent years agree on some key points: the programs should not be so complex that indigenous administrative capacities are outrun by significant degrees. At the minimum, there should be some concern for the likelihood that pilot IADs can be generalized; for example, what types of IADs will qualify? How can existing local institutions and administrative capabilities be most effectively utilized?

The six axioms under discussion all assume that what links replication across IADs to the sustainability of any particular IAD is articulation with an urban hierarchy, *down* which and *from* which innovations in the form of technologies and institutions flow. Where the axioms differ is in their identification of the crucial aspects of the hierarchy and the structure of "articulation" with it. In terms of sustainability, the differences among the axioms amount to differences among check lists of categories where too much variance or uniqueness reduced replicability to other settings or continuation in time at existing settings.

Sustainability for five of the six axioms is a center-periphery issue. "Sustainable innovation" means "sustainable linkage to the center." It means "the reproduction across rural spaces of urban functions and urban modes of economic organization." Entrepreneurship is an example. The axioms associate entrepre-

neurship with individual risk-taking in the context of individual economic enterprises. In poorer rural areas, however, innovation can just as easily mean creativity collectively organized, within the context of local organizational arrangements. The axioms assume that integrated area development is a form of administered innovation. That assumption may be inconsistent with local creativity which expresses itself in arenas and through organizational forms not recognizable to urban bureaucrats; not familiar to existing regional development monitoring and evaluation schemes; and, perhaps, not compatible with urban settings.

Is "continuance" an adequate basis for attributing sustainability to any institutional arrangement? Considering the widespread use of subsidization, even for areas that are not that badly off, there is ample reason to question "continuance" as a criterion for sustainability of IADs. In fact, sustainability needs to be assessed in relation to complex system dynamics that are unstable; that require different patterns of adaptation to changing conditions; and that demand different tests of relevance for viability. The equity issue illustrates the problem. Sustaining an equity strategy demands greater understanding of systems, their institutional dynamics, their ideological supports, how those interact and change, and how alternate forms of external intervention may be needed over time to accomplish even the same ends. Simplification undoubtedly facilitates action, but it in no way ensures programmatic

success. At best, it yields administrative success: resources and people are employed.

That does not mean that a necessary condition for sustainable IADs is autonomy, an implication of the decentralization axiom. That is an illusion which ignores different resource endowments, broader exchange and marketing patterns, and the realities of the Philippine political system. That may come as a disappointment to some, but, in fact, even if autonomy and insulation were possible, they would still lead to fragmentation in coping with problems that significantly influence several IADs, but are not subject to effective or even independent modification by the actions of any individual IAD.

It follows that the characteristics of axiom-generated strategies and axiom perspectives on development and equity cannot be assessed independently of the organizational characteristics of the systems in which they are to be applied. Each of the axioms assumes a strategy and dynamics, the applicability of which are limited only by resources and political commitment. A few examples, however, illustrate the limits of that view. The Urban Functions Axiom assumes that urban indivisibilities are operating as a collective good that extends beyond the spatial concentration of functions. Strategies involving concentration of investment in the urban center will have spread effects, in large part because of the presumed indivisibilities. When the concentration strategy is implemented in a context with reduced urban indivisibilities, the result is the subsidized en-

clave—dependent on support from outside to play the role not met functionally by spatially contiguous areas. If the subsidized support fails or is suspended, the urban center can go from boom to bust with astonishing speed.

The Assimilation Axiom assumes a developmental logic that visualize a periphery less differentiated and less cohesive than the center. It assumes that the center has "dominance" over the periphery because of two types of "centrality" which it possesses. The first is derived from the ideological and politico-economic system which identifies power and innovation with the urban center. The second is related to the external effects of urban development in the center, effects from which the periphery cannot exclude itself. This assumes that the periphery will be assimilated into the center at the center's discretion because the center is more cohesive (therefore more sensitive to recruitment issues) and more differentiated (therefore capable of finding more niches into which the periphery can fit). A variety of peasant rebellions and colonial confrontations suggest that if periphery coherence is high and center coherence low, the assimilation strategy can only be continued through the exercise of extraordinary resources, in effect translating assimilation into incorporation and, in some instances, conquest.

The Coordinated Functional Inputs Axiom assumes that the center is more differentiated than the periphery and that the periphery must be complex enough to absorb the inputs the center is bringing to it. Cohesion in the periph-

ery should be high so that inputs concentrated at selected points in the system rapidly move through the system. When this strategy is applied to complex but not particularly cohesive systems, benefits take root but tend to concentrate at that point. If the periphery is not reasonably complex, there is little chance the intervention will have any impact. If there is an impact, it can be one which fragments the periphery, strengthening bases for stratification and differentiation that were there as well as creating new bases. Many rural development programs have fallen into this trap. They are too complex for the social systems they are placed in. If they last, it tends to be at the price of weakening local capacity in the program area to keep the program going. Collier describes the breakdown of community level welfare institutions (e.g., reciprocal labor in Java) as a result, in part, of the diffusion of new agricultural technologies.⁶ A number of persons have suggested that traditional reciprocity values and behaviors in the rural Philippines may be breaking down in similar ways because of land reform, the green revolution, and so on. Others have suggested that green revolution successes in Philippine rice production may have been achieved in some instances at a cost of increased indebtedness and diminished local capacity to invest. These are examples of highly differentiated external forces pressing on local sharing and co-

ordinating arrangements evolved to deal with differentiation that was structured along other lines.

These examples illustrate two important points. First, regional dynamics can rarely be ignored in dealing with issues of subregional development. Second, the process of administrative intervention implied by the axioms needs to be viewed as part of a larger process in which forms of complexity are being imposed on systems which do not always have the structural capability to support such impositions or their impacts. The latter point cannot be emphasized strongly enough; for example, policies designed to promote some set of equity goals and implemented through a set of administrative arrangements may, by themselves, be viable; but they rarely operate by themselves. Instead, they coexist with external forces which, among other things, have significant impacts on local social stratification and occupational mobility systems. Creating 50 hectare irrigation zones with local irrigation associations to control water allocation in those zones is noteworthy by itself. It very nicely complements in some cases long-established modes of local cooperation and organization for allocating and sharing water resources. When the zone arrangement is connected to large scale system management, then an immediate shift in significant decision making and a possible undermining of existing broker roles that mediated local-external relations occurs.

The axioms are not infused by an adequate sense of their own connection with wider socioeconomic forces and to what

⁶W. Collier, "Rural Development and the Decline of Traditional Welfare Institutions in Java," Paper presented at the Western Economic Association Meeting, Honolulu, Hawaii, June 1978.

degree outcomes from the axioms, whether positive or otherwise, are dependent on particular patterns of interaction with specific external forces. In these circumstances, both failure and success share a common malaise: one cannot be sure why the axioms worked as they did. It is not surprising that attention is shifting from administrative productivity to the sustainability of development program impacts. Can the center continue to support programs in the periphery? Can the periphery maintain at least a stationary position on a treadmill where adequate local project capacity always seems a step away? Common ground for all the axioms is their agreement that innovation is exogenous to the IADs, coming from mobilized administrations, urban hierarchies, dominant ethnic groups, and the like. Two curious paradoxes follow. The first is that while the integrated area development concept would seem to encourage some interest in intermediate social units, i.e., social entities between the village and the nation, such interest has been very slow to show itself. This is paradoxical because it is just such intermediate social units which are the "stuff" of IADs, *if* the IADs are something other than a way of dividing administrative labors. What interest there is in intermediate social units has been much more instrumental and narrowly focused: what are the existing political and administrative units within the IADs and what are their capacities?

The second paradox is that little attention has been paid to the one factor which clearly is exogenous to any IAD: the pattern of change in the political eco-

nomy of the Philippines. At the same time that regional plans have been written and some regionalization implemented, the power of the central government has dramatically increased. That is a change exogenous to any particular IAD, but one which significantly limits what structure and content a given IAD can expect to assume. Some might argue that compared to the other axioms, the Decentralization Axiom may be exempt from that charge. The Decentralization Axiom may be providing the symbolic satisfaction that accompanies some forms of political or administrative prestige, but that has little to do with many of the equity difficulties that typically accompany political consolidation and economic change. If that is accurate, then the decentralization axiom is an illusory axiom because for almost all IADs the option of insulation from the influence of change occurring elsewhere is not available. Decentralization is not equivalent to local development.

IAD Programming As Data Base Dynamic: The Case of Equity Policy

Is IAD programming, whatever the guiding axiom, essentially different from the procedures developed to identify and monitor projects in non-IAD settings? One way to answer that question is to ask another: What do we need to know in order to do IAD programming? The case that will be used in this discussion is one that is the basic reality in IAD programming, but one which normal line agency programming does not fully acknowledge—the simultaneous presence of several projects and operating policies. In moving from that reality

to an iteratively programmed IAD, how crucial is it to know the indirect effects of specific policy variables on system performance indicators other than those at which they are primarily directed. This is a crucial question in practical terms, because if a great deal must be known in all cases, then a very substantial data base needs to be generated. At the minimum, the logic of goal-directed cross impact analysis would apply, but estimating probabilities in a complex system can be extremely demanding under the best circumstances. It is therefore very important to understand when an approximation of knowing everything would be adequate; and how much of an approximation would be adequate.

Assume that the integrated area development goal is to maximize a welfare function:

$$W = W(Y_m) \quad (1)$$

where Y_m is an m -component vector of socioeconomic, political, and administrative variables that describe the IAD system and its setting.

To maximize this function, IAD programming can select from a given range of policy instruments. If the policy variables are denoted as elements of an N -component vector X_n , then the elements of Y_m can be expressed as:

$$Y_m = Y_m(X_n, V_n, Z_n) \quad (2)$$

V_n is a vector of n variables which describe structural linkages between the IAD and the larger society. Z_n is a vector of exogenous variables outside policy influence at the IAD level. Then the elements of the policy vector X_n entering the welfare function are also ele-

ments of the vector Y_m . That can mean that the policy variables (X_n) will actually be direct expressions of political or setting variables (for example, central place dominance expressed by fiscal policy constraining financial transfers).

If equation (2) is completely decomposable, the resultant sectors can be called *basic structure sectors*. This would amount to expressing each IAD variable (Y_m) as a function of specific (X_n); structure (V_n), and exogenous (Z_n) variables. If the policy variables X_n are divided into more than two sets with *each* policy variable appearing in only *one* set, then the basic structure sectors which contain variables influenced by policy variables are *basic policy sectors*. That means that it is not necessary for all basic structure sectors to be influenced by any policy variables.

Now, if it is assumed that the policy sectors corresponding to *any two* sets of policy variables contain *no* basic structure sector in common, then the system can be treated in terms of independent policy sectors. That is similar to the logic additive programming. The problem is that the independence condition is not valid if overall IAD welfare (W) depends on the interrelationships of basic structure sectors. It is not impossible, but it seems highly unlikely that welfare would be unrelated significantly to the interrelationship of basic structure sectors. An exception might be the IAD that is extremely undifferentiated and isolated.

However, if equation (1) could be decomposed into p functions each consist

ing *only* of a group of basic policy sectors that together were disjoint with all other basic policy sector groups, then each group could be considered a welfare sector. *W* could then be maximized by maximizing each of the *W_p* functions independently (although the different policy sectors in the same welfare sector could not be maximized independently). This condition will not always be present. What is more common is that each set of policy variables (for each *W_p*) will depend in part on values of IAD variables in all welfare sectors. In that case, equation (1) is *not* decomposable although equation (2) may still be decomposable. An example is reduced irrigation water available to an IAD because of upstream diversions that may impact IAD capacity overall to mobilize local organizational resources and carry local financial burdens. In practice the issue turns on interpretations of how much of an "in part" dependence is significant.

What if individual policies are developed by distinct decision processes? The very nature of subregional planning in a centrally organized political system implies that the impact boundaries of many policies, especially if they are treated as public goods, will not be consistent. Does that mean that distinct institutional arrangements, equivalent to the policy's functional boundaries, are needed? If that were the case, then in practical terms, programming between policy types with functionally distinct boundaries might proceed independently with sacrificing allocative efficiency in the provision of public goods *given* the balkanization of policy arenas. This is

an important issue for integrated area development because the incidence of central place impacts is often different in terms of the distribution of costs and benefits. For example, if the costs and benefits of the central place hierarchy do impact different groups with different policy arenas involved for each, it may be very difficult institutionally to ever renegotiate an agreeable set of IAD boundaries.

Mancur Olson has written about these questions and some of his conclusions can be incorporated here. In relation to allocative efficiency as a question of who pays and who benefits from the incidence of public goods, Olson concludes that if there is no complementarity in production among different public goods, i.e., the production of one does not imply provision of a second at lower costs than producing the second by itself, then a separate set of decision-making arrangements are required for all public goods with unique boundaries⁷. The logic is that if the exchange system is atomistic, i.e., there is no clear arrangement through which a collective interest is being organized, then the only way to elicit group-oriented behavior is by "separate and selective incentive"⁸ for each latent collective interest. Olson's argument is persuasive, but it does not consider a possibility which is more plausible. The complementarity premise can be stated in terms of costs. If costs

⁷Mancur Olson, "The Principle of 'Fiscal Equivalence': The Division of Responsibilities Among Different Levels of Government," *American Economic Review*, Vol. LVI (1969), pp. 479-487.

⁸Mancur Olson, *The Logic of Collective Action* (New York: Schocken Books, 1971).

are examined in terms of probabilities of future allocative inefficiencies at the micro-level (e.g., with sub-regions) precisely *because* of allocative efficiencies at the macro-level (e.g. between regions) then the production of one collective good can imply that provision of a second will cost *more* than providing the second by itself. For example, regional growth policies can make subregional equity policies more costly overcoming unequal access to productive assets sub-regionally. In such cases, a major factor operating is the strengthening of institutional arrangements which reinforce convergence of economic stratification with other forms of stratification. Allocative efficiency, in practical terms, can be one approach to deciding how significant interaction between policy sectors really is, but the perspective should be amplified by considering public goods consumption and their impact as well as public goods production and their impact.

The institutional and programming problem which IAD programming raises is not which impact curves to generate most often or even most intensely, but rather which intersecting impact curves to use as points of programming departure. Answering that means a substantial comprehensive understanding of system dynamics. It means a commitment to monitoring system performance in terms of crucial impact categories. As is being suggested here, that means monitoring IADs in terms of significant structural processes, significant because they are the determinants of welfare outcomes on a sustainable basis.

Conclusion

This Iliad through the ILL-IAD was borne from a belief that integrated area development, as currently conceived and practiced, is not necessarily an adequate or even a positive statement of equity-oriented regional development policy. While the integrated area development idea understandably has considerable intuitive appeal, an examination of the assumptions which motivate existing integrated area development models does not support an alternative and more favorable conclusion. Does that mean the integrated area development movement in contemporary international development circles is another equity hoax? Not necessarily. As indicated at the very outset of this essay, integrated area development is limited by political realities. Integrated area development, although falling short, does however raise a range of important conceptual, administrative, and institutional issues. Those issues need to be raised if equity policy, as policy which confronts the dynamics of poverty, is to be brought into focus. Can debate about and experience with integrated area development provide the lens for reaching that focus? If discussions about integrated area development can move from axioms to hypotheses; if statements of faith can be converted to falsifiable propositions; if integrated area development as an exogenous manager of development processes can be restated as a problematic product of those development processes—then the process of lens-grinding may be initiated.