

A CRITIQUE AND TEST OF
"GUIDELINES FOR URBAN AND
REGIONAL ANALYSIS"

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FOREWORD

In April 1977, the author undertook a six-month assignment for the Office of Urban Development, Technical Assistance Bureau of AID. The major part of the assignment was spent in Panama working with USAID and the Ministry of Planning and Economic Policy in pre-project analysis for the URBE Program. The URBE Program is a comprehensive area development program for Western Panama, a region containing have the population of the country with income levels less than half that of the metropolitan region.

One goal of the assignment was to produce a critique and test of "Guidelines for Urban and Regional Analysis: Types of Analyses Applicable to A.I.D. Activities" by Richard E. Rhoda. Details of the test are found in the document, "Mapping the Poverty Line in Western Panama" by Thomas H. Eighmy and Agustin Garcia L. The latter document is a regional analysis of the 48 districts of western Panama with a focus on poverty. This critique and test is best read in conjunction with the two other documents.

Not all of the types of analyses in "Guidelines" were applicable to the URBE project. The approach here represents a general critique and specific applications reflecting the URBE experience. It also reflects the personal experience of this author in related activities in other countries, specifically Nigeria, Sierra Leone, Afghanistan, Guatemala, and elsewhere.

It should be remembered that "Guidelines" represents the work essentially of one person in a single three-month period. The task faced by Rhoda was formidable. Regional analysis, and to a lesser extent, urban analysis, are essentially exercises in "thinking spatially"--

in superimposing a discipline of spatial distribution, interaction and change upon conventional verbal description or quantitative analysis. "Thinking spatially" requires a recognition that a nation, a subnational region, or an urban area is not a dimensionless point, although such a simplification of reality may suffice for certain types of economic and policy analysis. The audience for such a document is diverse. AID Mission staff and host country staff may find the spatial discipline a new one. How in 105 pages can one impart a spatial perspective? Given the constraints, Rhoda has done a commendable job.

The regional analysis practitioner finds himself concerned with current concepts and methodological issues. Each issue raised feeds backward to questions of time and data availability and forward to questions of project formulation. Analysis is conditioned by AID project documents (e.g., PIDs, PRPs, PPs) often framed against a background of changing questions by project teams within the Mission, AID/Washington and the host country. Frequently, the membership of these project teams shifts and with each shift come a new series of questions.

On the whole, I think reaction to "Guidelines" is favorable. In terms of providing a common basis of discussion between officials of the governments involved and Mission personnel, I think the "Guidelines" have made a very good contribution. Principles of social science analysis are now being applied to what were previously largely administrative documents with a very generalized level of verbal descriptive analysis. The sections on relevant questions were especially useful.

"Guidelines" cannot be expected to act as a course in urban and regional analysis. But, revision of the "Guidelines" would benefit by an inclusion of representative maps, data coding matrices and diagrams illustrating, for example, central place functions and linkages analysis. If a concern for space and spatial analysis is to be one of the guiding

principles , then the prospective reader must be presented with an opportunity to think spatially through the incorporation of such maps and diagrams. Secondly, parallel elements need to be combined to show the degrees to which different types of analyses are interlinked and draw upon a common data base.

Three general problems emerge, which each application will address in somewhat different ways.

1. The problem of the audience. Inevitably, much of "Guidelines" is outside of the experience of many of the intended "target group" of readers within the countries involved, the AID Missions and AID/Washington. At the same time, for many others, "Guidelines" presents a review of known materials and concepts. "Guidelines," of necessity, seeks a middle ground.

2. The problem of time and exhaustiveness. A full analysis cannot be carried out in any reasonable time frame and level of effort consistent with most single project preparations. This problem is handled by division into subtypes of analysis. Later I will suggest that the DAP may be an appropriate place for urban and regional analysis.

3. The problem of adaptation. The requirements needed to adapt "Guidelines" to individual country conditions and individual project designs are stringent. What emerges may bear little resemblance to the outline presented in "Guidelines." I think a rigid checklist approach in each country is neither desirable nor possible.

These three general problems underlie the critique and test which follows. The critique refers directly to "Guidelines."* Any recommendations and opinions are labeled as personal, recognizing that there will certainly be divergent viewpoints. The balance of this critique and test should not be interpreted as detracting from my overall positive response to "Guidelines." Rather, the comments should be treated as amplifications of specific points which could be considered for revised versions.

* Discussion of Section III, "Applications of Urban and Regional Analysis," comprising the last nine pages of "Guidelines," is not treated separately. The Panama test is one application of several which have been sponsored by the Office of Urban Development and which can be incorporated in revisions of this Section.

I. INTRODUCTION

The introduction stresses the importance of appropriate analysis to successful development efforts. Rhoda correctly emphasizes the utility of both verbal and quantitative analysis. But, I must quibble slightly with his contrast between urban-regional analysis and sectoral analysis. Urban and regional analysis by its definition is multi-sectoral. Which sectors are emphasized or excluded, of course, depends upon the purposes of the analysis and the goals of the development assistance program (DAP) for each country. I think Rhoda and I are in agreement that the term "urban sector" is confusing and should be dropped. Urban and regional analyses are identified by the spatial perspective and the analyses are performed on several sectors (page 2). The example of a regional education analysis, I think, should be replaced. What is discussed is an education sector analysis applied to a sub-national unit. Sectoral analyses can and should include regional components, and urban-regional analyses can and should include multiple and inter-acting sectors. We are in agreement that urban analysis is a special case of regional analysis. As the scale of investigation shifts from single or multiple metropolitan areas taking each urban place as a point, to a regional analysis, the impact of distance, access and variability from area to area take on greater importance.

Multi-regional analysis (page 3) really consists of taking national or sub-national units, shrinking them to a point, and looking at interactions and transactions among these points.* Similarly, the multi-regional nutritional analysis mentioned on page 4 is an example of a

* See the conventional three-part division, The Homogeneous Region (Inter-regional Macroeconomics), The Nodal Region, and The Planning Region in H.W. Richardson, Elements of Regional Economics (Baltimore, Penguin Books, 1969).

sectoral analysis with a regional component. But surely, nutritionists (sectoral experts) would consider a nutritional analysis to include much more than is mentioned here. For example, summary indicators of weight for height, weight for age, height for age, and other anthropomorphic measures, as well as incidence of disease broken into appropriate age and sex categories are commonly included in nutrition studies. To the degree that these various indicators can be presented by urban and rural breakdowns or sub-national areas, so much the better.

The notion that more detailed urban and regional analysis may be required in DAP presentations (page 5) may be greeted with some groans from Mission personnel asking: "If more is to be included in project preparation, what is to be excluded?" However, Rhoda makes an important point here which I think needs to be emphasized. A DAP may well be a more appropriate place for urban and regional analyses than individual project submissions. The reason for this is that there is a relatively high level of effort required to establish the data base. This data development is a legitimate concern of central statistical offices of the host country and their ministries of planning and finance. AID may justifiably recoil from entering into the survey research business for every project that comes out of a country. But, there are economies in establishing this data base in such a manner that the most likely data requirements for sectoral projects, whether they are national or regional in scope, can be drawn from the same data base. There was some encouraging evidence within the Panama Mission and the Ministry of Planning that this might indeed become the case. The data base requirement for the URBE regional analysis drew upon existing data from the census and survey organization and other line ministries. Once the principles were established, the data coded, and the processing arrangements made, it would be relatively simple to extend the analysis from the URBE districts to the rest of the country. The same indicators (and additional information) could then be added as the results of the 1980 round of censuses

became available. Survey data is not at the same level of aggregation as census data, but frequently provincial or urban and rural estimates are made on the basis of survey operations. At low cost, because the memory requirements are small, such survey results could also be included in the computerized data base. Specialized reports for different sectoral projects could then draw upon this data base.

This DAP approach to urban and regional analysis seems to offer several advantages. AID need support at the most one major series of surveys which can be incorporated in the work plan of the host country survey organization. AID then need not enter into survey research for individual projects but can rely if necessary on a smaller program of structured interviewing of key respondents, including the target group. The host country organizations are then not overwhelmed with requests for surveys on top of their regular work. At the same time, lead time for pre-project analyses can be shortened.

One other AID document should be discussed in the Introduction. AID personnel are accustomed to the "Logical Framework." Increasingly, the discipline which the "log frame" imposes upon project planning and evaluation is utilized by other donor agencies and by host countries. In a future revision of "Guidelines," it might be desirable, at least in an annex, to relate urban and regional analysis to project baseline studies, objectively verifiable indicators of progress, and end of project status.

II. TYPES OF URBAN AND REGIONAL ANALYSIS

This section constitutes the bulk of "Guidelines." Sections on ten types of analysis follow which are intended to be essentially free standing. However, there is no introduction to these ten types of analysis, merely a listing and nine references. A revision of "Guidelines" would benefit by an elaboration at this point. It is not sufficient to assume that readers will understand the ten subtypes of urban and regional analysis without such an introductory section, nor that they will have read the nine references presented or find them readily available. There are unifying themes in all subtypes of regional analysis. These include a common concern for an understanding of the force and direction of the processes at work in developing countries, the organization of space both as a conditioning agent and a response to these processes, similarities and differences in techniques of analysis and elements of the required data base common to several types of regional analysis. Tables showing similarities and differences among the subtypes of urban and regional analysis could serve to organize this section. If "Guidelines" are to have any success in encouraging the reader to think spatially, the idea must emerge in this introductory section. As noted in the Foreword, the revised "Guidelines" should include maps and diagrams to help the learning process along. Central place theory remains a sterile tautological approach if not buttressed with maps and diagrams in the same way that economic thinking is buttressed by graphs and equations. As noted earlier, it is too much to expect that "Guidelines" become a "short course" in urban and regional analysis, but I think it must at least contain an inkling of what such a short course would contain. By stressing the common elements of the various subtypes of urban and regional analysis, some economies in later portions of the "Guidelines" could be achieved, although I am certain that the net effect would be to enlarge the document.

It seems necessary to explain in this section why urban and regional analysis is necessary and desirable for AID, in the way, for example, that economic analysis has always been part of AID pre-project analysis while what might be called historical analysis has received little more than lip service. A partial answer is that events or processes, categorized as sectors, act through time and across space. Thus sector, space and time are three coordinates of knowledge. Historical and regional analyses are by definition multi-sectoral and differ only in the relative emphasis placed upon space and time. Spatial analysis in its simplest sense provides an understanding of the context in which sectoral programs must operate.

The bibliography should be extended beyond the AID and Work Bank review and policy documents which dominate the present nine items. An extended bibliography might include subdivisions on classical theory and modern extension, techniques of analysis, reviews, bibliographies, policy statements, and applications. Certain items could be starred in the bibliography and made available in AID Missions. These could form part of a reading list for an expanded AID Development Studies Program "short course" in introductory urban and regional analysis.

It is equally important that at least some of the bibliographic materials be available to the host country planning agencies. This problem is more complicated than provision of materials to the Missions since translations into French and Spanish may be necessary. In a few cases, theoretical works and applications do exist in French and Spanish. A special issue of Revista Geographica, with extra copies for distribution, could be a means of extending the concepts and basic materials of "Guidelines."

A. National Policy of Urban and Regional Development.

The rationale for urban and regional policy is simply that the nation is too large and heterogeneous for single policies and programs. National policies of urban and regional development make problems more manageable and, theoretically at least, put responsible officials in closer contact with the project participants and beneficiaries. Urban and regional development projects carry several labels as noted on page 11 (growth poles, growth centers, regional development, intermediate-sized city development, urban decentralization, market towns, rural service centers, and rural development). We might add to this already imposing list off-farm employment, informal sector policy, small scale agro-industry development, and other projects which operate in a defined area within a country and which involve multi-sectoral area development. This list is not meant as "regional empire building" at the expense of sectoral projects. It does serve to emphasize the wide range of existing AID projects with regional and urban content.

Rhoda correctly draws the distinction between explicit urban and regional policy as reflected in planning documents and implicit policy as revealed through budget and manpower analysis. The problem with budget analysis is that it is not often possible to allocate central government expenditures to specific regions. Health and education expenditures, for example, are budgeted centrally but dispersed locally in a manner not easily traced through budgetary analysis. The type of social accounting which attempts to value the contribution of each family to the national government and the value of national government services to each family can also be an error prone process.

Another useful non-quantitative exercise along with budget analysis for determining implicit versus explicit regional policy is an examination of laws regarding devolution of power and responsibility and the implementation of such laws. In other words, there is a legal and

political basis to regional policy as well as a financial one. Regionalization, or decentralization of activities may rightly take different forms in smaller Central American countries in contrast to Brazil, for example. Decentralization may take the relatively simple path of deconcentration. This is a "branch office" philosophy involving the delegation of adequate authority for the discharge of some functions to staff dispersed away from the capital city. Panama has carried this deconcentration to the next step with the relocation of the Ministries of Public Works and Agriculture away from Panama City to the URBE area. Few countries have followed the alternative approach of devolution. This is a policy requiring the central government to willingly relinquish power by devolving specified functions to formally constituted or elected local government authorities with adequate training and resources to carry out these functions. To the degree this happens, a country may be said to have both an explicit and implicit regional policy.

I would have to take mild exception with the assumption that primate cities often receive a disproportionate share of private investment (p. 13). Disproportionate to what? Population, GNP, or some other criteria? There is general agreement that too much spatial concentration is unhealthy for a country, but there remain some legitimate questions about what constitutes a "disproportionate" share. Rather, the concentration of private sector economic activities in a few places may reflect an accurate private sector determination of economies of scale, market potential and externalities. It may be good policy to encourage private investment wherever it is most efficient and use the government redistribution system to achieve social ends through taxation and investment in social overhead capital throughout the nation.

B. The Distribution and Characteristics of the Poor

and

C. The Distribution of Development and Underdevelopment

These two sections, I feel, are the best presentations in "Guidelines." The "why" of regional analysis comes through, some of the "how" is suggested, and the relevance to AID projects should be clear to Mission and host country personnel. Rhoda separates the two sections by noting that section B applies only to the impoverished population while section C applies to the total population. However, section B really concerns the definition of poverty in a given country and section C considers the location of poverty and poverty characteristics other than income. There is so much overlap between the two sections that I would favor their combination in any revision. It is people, not areas, which are impoverished, but the importance of the location of poverty and areal association of poverty indicators are very helpful in understanding the social and spatial structure of a nation, region or metropolitan area, and of targeting programs effectively. Section B stresses the handling of income but the spatial distribution of income within the region or metropolis cannot be derived from the income survey results utilized. That is, the survey data normally available for poverty line analyses do not say where the poor live. There is another reason for combining sections B and C. At an operational level, the data to be utilized in an analysis does not conventionally separate poor from non-poor on some arbitrary category but reflects either complex census data or a representative sample of all the population in an area. For this reason, a regional analyst must begin with the entire population of an area and then work upon the definition of poverty considering both its statistical distribution (the poverty line definition of section B) and its spatial distribution (characteristics and maps of development--section C). The importance of maps is

stressed in section C but the presentation here, as elsewhere, would benefit from their inclusion. A frequency diagram of the income distribution data presented in section B would serve to clarify the poverty line. Similarly, the suggestion that air photos be used where available, especially in metropolitan areas, is a good one since this source is frequently overlooked. Photos and maps are by their nature "messy" to work with but the information they can provide can be worth it. Obviously, air photos, census data and maps are more valuable if used jointly instead of separately. Photos can reveal size, density and, to some extent, quality of housing, but on-the-spot ground truth survey or census tract data is necessary to correlate this with crowding, poverty and absence of services or unemployment.

The presentation also discusses multi-dimensional definitions of poverty as derived in the Panama test. One point of caution is that the example listed (adults with less than five years of formal education who are unemployed or in unskilled occupations) provides a more accurate measure of poverty than one single variable, but is a more restrictive definition since the union of the two variables (education and employment) is required.

A good portion of the Panama regional analysis is in the mold of sections B and C. Verifiable indicators of poverty were developed from census data and later correlated with survey results on income distribution. Panama has excellent sources of census data but the computer software discussed in "Guidelines" was not available. The services of a small custom computer programming firm were utilized satisfactorily.

D. The System of Central Place Service Centers.

and

F. Analysis of Key Urban-Rural Linkages.

Conceptually, rural-urban linkages cannot be separated from the central place system. These two sections should be combined in any future revision. Several terms are used in the discussion of central place theory which need to be defined for the typical reader. Central place theory can be explained adequately in terms of threshold population, range (minimum, average, and maximum), urban hierarchy, trade areas (areas of influence or hinterlands and their "overlap" and "underlap"^{1/}), and network flow. This section of "Guidelines" literally cries out for some kind of illustrative material (maps or graphs). Some of the classic documents on central place theory and other aspects of location theory should appear in the bibliography. Finally, a section on theory and reality should be included. Agro-industrial processing plants are more a function of agricultural production than population, and are not usually considered to be central place functions because they do not provide goods and tertiary services to the urban and dispersed rural populations. Such non-central place urban functions, topographic variability, differing levels of subsistence economies, and areas undergoing rapid technological and population change may be reasonably expected to vary from the classical theories which are based upon a number of simplifying assumptions. The point is that, as the simplifying assumptions are relaxed one at a time, the theory is capable of predicting the form that change will take. Classically, population and income are measures of demand and only incidentally in a relatively stable system should they be correlated with the number or size of central place functions. The supply of functions will lag or lead demand at any time.

^{1/} In many developing countries, rural areas effectively lie beyond the range of the service center.

In Panama, the existence of an urban hierarchy and the concept of service centers to support a rural population was well established. In this sense, the Ministry of Planning was considerably in advance of much of AID policy. A revision of "Guidelines" needs to discuss the relevance of central place theory to AID policy more explicitly. For example, the concept of "market towns" is consistent with AID policy and derives from central place theory. This linkage should be made explicitly.

An inventory of establishments by district or preferably by settlement is a requirement of any central place analysis. Sometimes this requires a thorough field survey which can be time consuming and error prone if based upon "windshield estimates." Panama had conducted a census of service establishments as part of the economic census of 1972 and an industrial census in 1975. As will commonly be the case, data was not published in a form suitable for central place analysis. Utilization of unpublished data was required. An important point, however, is that in Panama, the U.S., or almost any other nation, censuses are not allowed to reveal the operations of individual firms or establishments. Confidentiality of returns is a requirement of virtually all census laws. The finer the degree of spatial aggregation (towns or districts instead of provinces) or sectoral aggregation (according to the industrial and service classification used in each country), the more serious the problem of confidentiality becomes. In Panama, the problem was handled by using the district as the level of spatial aggregation and using ranges rather than exact values of employees and sales by very broad economic sectors.

In section F, Rhoda correctly identifies the data problems in conducting an analysis of rural-urban linkages. Flow data is notoriously difficult to get and when it does exist, often does not treat the entire nation or region under consideration and is not at the same level of spatial detail as other elements in the analysis. This was certainly

true in Panama. Between 1974 and 1977, the one computer printout providing detailed origin and destination materials for the national transport survey had disappeared.*

Usually, several types of surrogates for flow data are available. In Panama, direct measurement of Ministry of Public Works road maintenance maps superimposed upon topographic maps showing district boundaries, allowed a measurement of road mileage by district. Other unpublished census of population and census of agriculture data provided measures of participation in the modern sector of the economy. Traffic count maps are more commonly available than origin and destination surveys. This was true in Panama, and the conversion of a count map to estimate flows on different segments of the highway system is a visually effective way of indicating linkages. However, a traffic flow map should not be confused with an accurate origin and destination survey. Telephone and newspaper data affect only a small proportion of the population and doubtlessly exclude the rural poor more than other segments of the population. For that reason, these data may not be particularly helpful. In the determination of hinterlands, the most useful analytical tool is frequently the topographic map showing paved all-weather and dry-weather roads and tracks.

When adequate flow data is available, another problem arises. Analytical techniques which pass beyond simple description of the existing network can be very complex. Even complex techniques do not necessarily generate estimates of gaps or "what ought to be." Origin and

* At one time, which could be considered either the high point or low point of the Panama regional analysis, the author found himself plowing through trash cans in an unlighted elevator maintenance room seeking these printouts. Previously, the Canadian consultant, the Ministry of Planning, two offices of the Ministry of Public Works, and several individuals who had worked on the survey had all been contacted to no avail. The search turned up what was probably the only extant copy of manually tabulated agricultural production figures for small areas derived from the census of agriculture, but failed to turn up the origin and destination data.

destination surveys are not normally part of the AID package of pre-project analysis, although World Bank and regional development bank transport sector studies frequently provide for them. Household surveys with linkage questions are also expensive, and flow data is notoriously difficult to structure for data processing. None of these problems, however, are insurmountable and the analyst must always trade off the cost and time in obtaining this information versus the utility of it. It is usually more efficient to conduct surveys at concentrated sites or foci of the linkage system than in dispersed rural households. The author has attempted to do this on two occasions. The difficulties of locating homes, and of estimating the time and distance for rural people on foot to reach service centers were found to be considerable. In other words, such techniques as we have for quantitative and normative analysis are usually confined to modern modes of transport (vehicle, air, shipping). Unless one is willing to make assumptions about the exponent of distance, network capacity, and the effects of intervening opportunities, the gravity model approach suggested by Rhoda still requires calibration by actual flow data.

Given the data difficulties and the scarcity or complexity of appropriate analytical techniques, it would seem that AID project analysis should make do with surrogates for flow data. An alternate approach might look at differing price levels for agricultural commodities in different parts of the country. In an equitably and efficiently operating space economy, spatial price differences between surplus and deficit areas should be equilibrated by the cost of transport plus the cost of storage from period of production to period of consumption plus corrections for loss in transit or processing or due to pests and normal transporter's or processor's profit. The question then boils down to the utilization of area based production and a population estimate to determine areas of net surplus or deficit with a corresponding price series for each of the areas. Such an analysis can indicate the efficiency of the agricultural distribution system. Combined with information on the

location of the owners of transport, it should be possible to make some inferences about whether the rural producing areas are being decapitalized. In this respect, it may be noted that flows of funds are notoriously difficult to gather and frequently understate the total flow of funds for small producers and consumers. Finally, backward and forward linkages need to be explained.*

E. Migration Analysis

I would add to Rhoda's rationale for migration analysis that it seeks not only to describe and explain migration flows, but to predict them. Given the interplay of natural increase and migration, what are tomorrow's expected population levels and characteristics for today's major source and destination areas? What impact, both beneficial and negative, would these projections hold for present development efforts? This, it seems to me, is a more reasonable context for migration analysis than the design of programs to remove, reduce or deflect the migratory flows. Migration is really a key element in urban and rural linkages. It is usually seen in a negative sense. However, migration can serve to rationalize the distribution of labor to the benefit of the country and the individual migrants. Migratory flows can equilibrate seasonal variations in supply and demand for labor in different parts of the country. It can serve to increase production and incomes for those remaining in the agricultural sector if jobs can be found for the migrants to the urban centers.

In Panama, migration from the URBE project area, containing half the population of the country, toward the metropolitan region is well established. Analysis indicated that only three of the 48 districts in the

* The classic treatment is in Hirschman, The Strategy of Economic Development. New Haven, Yale University Press, 1958.

URBE project area were net receivers of migrants. The reduction of this flow to the metropolitan region, where problems of unemployment are severe, through the creation of alternate growth centers or of improvement in rural conditions is a goal of the Panamanian Government. AID's position has been that this could indeed be a desirable secondary impact of the URBE project but it should not be the primary rationale for it. To this author's knowledge, most projects designed to improve conditions in rural areas and small towns have had, if anything, the opposite effect of tending to speed migrants to the metropolitan areas.

Migration analysis has tended to be descriptive rather than prescriptive. We are not dealing with a controlled experimental situation and hence, once a migration analysis is completed, we are often still at a loss to assess the quantitative impact of prospective AID projects upon migration.

In the Panama regional analysis, rates and numbers of net migrants per year by district between 1960 and 1970 were estimated as a residual component. In essence, the 1960 and 1970 censuses were assumed to be correct and birth and deaths were used as registered toward the end of the decennial period. Internal consistency analysis indicated that birth and death registration was reasonably accurate. The migration estimates could be considered to be a response variable to a spatially differentiated economy. Since migration analysis per se was not an object of the regional analysis, in that we were not asking to "explain" migration rates through regression analysis, migration was treated as one indicator of urban-rural interaction. It was included in several principal components analyses to note its correlation and behavior with other variables. The use of the migration estimates did tend to support and to quantify general impressions about source and destination areas for migrants.

G. Urban Administration and the Delivery of Essential Services

In Panama, essential services were included in a regional analysis rather than being treated as a question of urban administration. The relevant government ministries, especially the water and electric utilities, were two of the line ministries most concerned with the overall URBE programs. They were not, however, to be recipients of specific URBE-AID subproject loans. Thus, their role in the regional analysis was relatively small and their institutional planning and financial capabilities were not subject to analysis as part of the URBE project. Urban diagnosticos had been made previously for each of the URBE growth and service centers. These attempted to identify needs, especially in sewerage, water and electricity. As part of another project, the author was involved in a feasibility analysis for sewerage and waste disposal in Freetown, Sierra Leone.* The questions phrased by Rhoda are good. The quantification of benefits to the urban poor and the ability of the various responsible organizations to support the project are recurring questions in the development field. As Rhoda has correctly pointed out, much of the data is non-quantitative and descriptive. We can only add that interviews with the key public officials need to be backed by observation and second sources whenever possible.

H. Analysis of Urban Employment

In Panama, unemployment as defined by the census was an urban phenomenon. Subsistence farmers correctly do not regard themselves as unemployed. However, as would normally be the case, good data on under-employment and the informal sector tends to be lacking. The 1975 census of industry covered firms with five or more employees and attempted a

* A principal secondary benefit of the Freetown operation was that it served as a catalyst to the local planning office to consider future growth and characteristics of Freetown.

survey coverage of smaller enterprises. As Rhoda points out, census returns provide a good starting point and can often provide a basis for estimates of the size of the informal sector, but not necessarily of its activities and characteristics. This accords with the firm size approach as discussed by Rhoda (page 81). The formal registration approach did not yield usable data, and did not indicate which firms were actually operating, as opposed to those which had been licensed.

I. Urban Functional Analysis

My inclination is to suggest that in future revisions, urban functional analysis should be included in a broader section of general functional analysis including the previous sections B and C. Economic base is one way of looking at non-central place functions of cities. Unfortunately, there is a rather sorry history of classification schemes in the literature. The easy question is always "Classification for what?" Location quotients, minimum requirements approaches, and urban or regional multipliers all tend to have unknown sampling distributions and are highly sensitive to the degree of spatial and sectoral aggregations.* For example, it is virtually tautological but the larger an area is in population, the more diversified it becomes in that most of its activities are concerned with provision of goods and services for other firms and households within its borders.** Such functional measures are most

* There was a spate of interest in such measures in the late 50's and early 60's. They all suffered from these common problems. The author at one time in a mercifully unpublished paper, defined yet a new coefficient, the "Coangular Coefficient of Linear Circuitry" which, signifying nothing, he hoped would be the coefficient to end all coefficients.

** At the regional level, this is the same as saying that "foreign trade" would be relatively and absolutely more important if the unit of analysis were 50 independent states as opposed to the United States.

useful when combined with shift and share techniques and other coefficients to look at changes through time for a fixed level of sectoral and areal aggregation. There is another danger in the use of location quotients. High quotients are sometimes interpreted as evidence of maldistribution of some variable, for example, administrative employment or industrial production. There is often an implicit assumption that values for all areas should cluster near one. Surely, economies of scale and agglomeration benefits, although sometimes difficult to quantify, are real. Some forms of economic activity need to be spatially concentrated in the interest of both efficiency and equity. The question is more usefully phrased as one of urban-rural linkages and integrated spatial planning. How do facilities (private and public sector), which need to be spatially concentrated benefit people both within and beyond the often artificially imposed boundaries which define the level of spatial aggregation and influence the value of location quotients?

In general, I feel urban functional analysis is simply not coequal with other subtypes of urban and regional analysis discussed in "Guidelines."

J. Social Analysis of the Urban Poor*

Rhoda rightfully comes down hard upon dichotomous social classifications. "Down with dubious disabling dichotomies!" I am forced to add here that the poverty line concept of current interest, and AID's programming interest in defining people as "poor" or "non-poor" presents us with a splendid opportunity to repeat the mistakes of the past.

* In Panama, we were of course dealing with a regional rather than an urban setting.

This section has more fundamental relevance to AID programs than do most of the other sections. In this regard, the typical questions are very important. Yet, questions about goals, aspirations, opinion leaders and attitude of urban poor toward the government are sensitive for both AID and the host government.* Reliance on existing studies often reveals more about the world view of the investigator than about the target group, due to problems of investigator bias and interviewer and interviewee response dynamics. Upon what basis are the results of these studies to be generalized? Do such surveys raise hopes too far? What if the world view turns out to be part of the problem, or anti-development? Should we then design projects which are consistent with this world view? Clearly, these questions are too broad to be discussed fully in "Guidelines." Rather, they are part of the broad dialogue within and between AID and developing countries.

* In Panama, the question of aspirations and characteristics of the urban poor will be handled through limited interviewing carried out by investigators at the University of Panama.