NOTES ON DEVELOPING COUNTRIES AND THEIR STATISTICS

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Statistics for developing countries often are misunderstood and misinterpreted because the published data do not distinguish between the economically *modern* and the *traditional* sectors. The purpose of economic development is to move a nation from the traditional, or largely non-monetary, subsistence agriculture type of life, to the modern or money oriented and technologically developed type. Statistics of national accounts, the economically active (the working force), and other topics often fail to be useful for economic development purposes because they are presented for the totality of the country and do not show the modern-traditional sectors separately.

In addition, data are often misinterpreted and used incorrectly because the development economists do not understand the nature of the data—how they were collected and what they really signify. This point is illustrated with the economically active statistics. Finally, a plea is made for more statistics and information about families.

My observations are concerned to a large extent with the need for measuring the subsistence, or non-monetary, aspects of developing economies. I illustrate my argument with statistics of economic activity (the labor force), and incidentally with family statistics. It is my impression that national accounts, prices, manpower, and related statistics are misunderstood and misinterpreted by "experts" engaged in economic development in part because the available data fail to distinguish the subsistence component. Also, and especially with regard to economic activity and related matters including the family, misunderstanding may arise because these data are misinterpreted.

As a prelude to subsequent remarks I believe that:

(a) Most of the data now being collected are useable and I am not advocating gigantic new data collection programs;

(b) often these already collected and potentially useable data are not coded, tabulated, and published in the most useful manner, and here there is considerable room for improvement; indeed, generally the published material is but as the tip of an iceberg in relation to the vast amounts of information originally collected;

(c) more often than not, the available data are misinterpreted by the users;

(d) statistics are collected in order to provide a basis for solving specific problems and formulating policy; they are not collected for their own sake. Therefore, they need to be accurate enough only for policy formation; the test is: how different would the statistics have to be in order to lead to different policy decisions?

(e) With further reference to point *d*, there are two interpretative levels of statistics. At one level the data can be used as indicators of situations or problems; e.g., the median age of a population indicates much about the population. At the other level, the detailed statistics provide the factual basis for arriving at policy decisions; e.g., the detailed age composition of a population is needed to study problems in the field of education, the economically active, etc. I believe that statistics detailed enough for problem solving are most useful.

As an example of misunderstanding note the remarks of Mr. Eugene R. Black, in "Development Revisited" (*International Development Review*, Vol. XII, No. 4, 1970):

" . . . it is time to blow the whistle on the statisticians. Far from providing the evidence on which to make confident predictions, the statisticians are hiding much more than they reveal. While the problems they are trying to illustrate—the problems of employment, of increasing inequalities in income and of the social impact of the introduction of new technologies—are very real and difficult problems, the fact is that they cannot be measured." (p. 3)

"When it comes to trying to measure concepts like employment and unemployment, we are even worse off. One common characteristic of all traditional societies is that there is a place for everybody, usually a divinely appointed place in an elaborate social hierarchy. As the static structure of these societies are progressively undermined by the dynamics of economic growth and by the intrusion of alien religious and political ideas, the members of society do not burst forth all of a sudden into modern ways of life and start looking for jobs as we do. There are infinite gradations in between where the hold of traditional life with its strong sense of belonging remains very strong. It is well that this is so, for the new freedom of the marketplace can be a terrible freedom indeed for those whose cultures so ill-prepare them to enter it.

"When we in the developed countries use words like employment and unemployment, we take for granted an attitude toward life and work that in the poor countries today is true of only a very small number. If it were otherwise, if those in the working ages really had to be measured by our employment standards, the development problem might be far simpler to describe, but it would also be a quite hopeless problem." (p. 4)

Mr. Black is correct in my opinion in decrying the misunderstandings and misinterpretations of these statistics. But to discard them entirely and say that they are useless and that we need all new data reveals a basic misunderstanding of the original data.

THE TRADITIONAL-MODERN CONTINUUM

Administrators in particular, and statisticians secondarily, feel an overwhelming need to show national totals first, and data for the various parts of a country second. I have been asked, "How many unemployed do we have in Country X?" I have never been asked, "What is the unemployment rate among

women in City Y?" Yet the information for the various components of a country is far more important for dealing with developmental problems than is the totality. Until this obsession with national totals is overcome, misunderstanding of the statistics will continue. Perhaps Mr. Black had this in mind when he wrote: "If baseball statistics were presented as developmental statistics are, our American national pastime would have long since disappeared." (p. 3)

Let us define "components" of a country; they can be geographic, social, ethnic, economic, demographic or any other segments of the whole population which may be important for economic development in a given country at a given time.

The most obvious distinction, to me at least, is that of the *modern* vs. *traditional* components; plus as many of the intermediate categories as can be measured. After all, the purpose of economic development is to move a nation from the traditional, or largely non-monetary, subsistence agriculture type of life, to the modern or money oriented and technologically developed type. We grant that it is difficult to develop statistics which will demarcate several gradations ranging from 100 percent traditional to 100 percent modern, yet statisticians must try to do so.

The inter-related topics of national accounts statistics and price data are susceptible to misinterpretation in the absence of information about the modern vs. traditional sectors. In many countries with large subsistence or semi-subsistence sectors a considerable part of the income originating in agriculture must be imputed. Imputation at best is a hazardous undertaking and leads to errors of unknown size. Accordingly, the statistics on actual income from agriculture should be shown separately from the amounts imputed. With such data it would be possible to study changes in the commercial sector of agriculture. As for the subsistence (or semi-subsistence) sector, any analysis is virtually impossible since there is no basis, theoretical or practical, for correctly imputing value.

If one is concerned with the welfare aspects then quantity rather than price and money values is the relevant measure. If it were possible to actually measure the quantities of agricultural products produced in the subsistence sector this could be added to the quantities produced in the commercial sector and a totality obtained. The available data on food supplies per capita which show the average number of calories, grams of proteins, etc., consumed per day provide one such measure of the totality. Unfortunately these data are so crude as to make analysis difficult.

In general, all international comparisons of national accounts and price data as well as manpower, or economic activity data, are invalidated to the extent that the countries being compared have large but unequal sized traditional (subsistence or semi-subsistence) sectors. International comparisons can be made realistically only for the monetary parts of the economy. In practical terms this means the cities, or urban areas.[1]

The United Nations provides only moderate help to national statisticians with regard to such measurement. Its *Principles and Recommendations for the*

[1] See also A. J. Jaffe and L. E. Quesada, "Assessment of Underemployment in Non-Agricultural Industries of the Less Developed Countries," United Nations World Population Conference, Belgrade, Yugoslavia, 30 August to 10 September 1965.

1970 *Population Censuses*[2] (*Statistical Papers*, Series M, No. 44) contains the following statements.

"(1) *Uses of census data for administrative and policy purposes* par. 18. The original and fundamental purpose of the census is to provide the facts essential to governmental administration and policy. One of the most basic of the administrative uses of census data is in the demarcation of constituencies and the allocation of representation on governing bodies. Detailed information on the geographic distribution of the population is indispensable for this purpose. Certain aspects of the legal or administrative status of territorial divisions may also depend on the size of their populations.

"par. 19. Information on the geographic distribution of the population, its size and its other characteristics is essential to the study and evaluation of economic and social problems, which must precede the determination of policy affecting economic and social development. Consideration of questions of employment and manpower programmes, migration, housing, education, public health and welfare, social services, economic and social planning, and numerous other aspects of the life of a country, are facilitated if accurate information about the characteristics of the population is available for civil and other administrative divisions."

The United Nations Secretariat and Statistical Commission did emphasize "components" of a country, with much attention paid to political geographic subdivisions and of course, urban and rural. But nowhere in the document, or in other documents with one exception, advising on the use of statistics and published by the United Nations or any of its Member Agencies, do I know of any specific references and emphasis upon statistical demarcation of the traditional and modern sectors. This one exception is the volume, *A System of National Accounts*;[3] Chapter IX, "Adaptation of the Full System of the Developing Countries," emphasizes the importance of the traditional vs. modern components. Unfortunately, a number of years will elapse before this idea is disseminated. In the meantime, all previous statistics, and most of those to become available in the 1970's, have, or will have, very little emphasis placed on the traditional vs. modern phases.

Recommendation

Accordingly, my first recommendation is that the United Nations encourage the development of socioeconomic regions for which data can be presented. If a country can be divided into many small geographic units each of which is as homogeneous as possible, such regions could be arranged to provide statistics for the continuum from traditional to modern. Such socioeconomic regional data should be available in addition to statistics for political jurisdictions.

[2] This document is the most widely used one by national census organizations and statisticians. In many countries, especially the developing ones, the bulk of the statistics on population and economic activity which become available are the result of this document.

[3] Statistical Office of the United Nations, *Studies in Methods*, Series F, No. 2, Rev. 3, 1968.

Admittedly it is not a simple job to devise a system for demarcating socio-economic areas. I do not intend to provide such a system now. I simply wish to point out that over the years a great deal of work has been done on this general type of problem and that it is solvable. If the statisticians of a country, or of international agencies, wish to develop such socioeconomic area statistics, permitting analysis of the traditional-modern continuum, they can do so.

Improvising—the Example of Panama

In the absence of such socioeconomic regional statistics the statistician can only improvise. That this can be done reasonably successfully, in some countries at least, is evidenced from the experiences of the Republic of Panama. This country has one major city, Panama City; the second largest city, Colon, is reasonably close by, virtually within commuting distance. Between these two cities and around them are a variety of modern factories, commercial farms, and other modern type establishments. By using a combination of available statistical data together with on-site inspection, the Metropolitan Area encompassing these two cities and their surrounding areas was demarcated. As it turned out, there are very few subsistence or semi-subsistence farmers here, and the great majority of the workers are employees who receive cash wages and salaries. This is very largely a money-oriented modern component.

Within this component further subdivision is possible by means of the statistics on economic activity (to be discussed subsequently) into "more" and "less" modern, and the small agricultural population can be shown separately. Finally, each urban locality ranging from the largest, Panama City, to the smallest, can be shown separately.

The remainder of the country (excluding the Indians living on reservations) is largely agricultural, but also contains some economically modern segments. Separating the remainder of the country into conventional urban and rural parts approximates further subdivision between traditional and modern.

Additional information available for the rural area, partly from the census of agriculture and partly from the sample household survey, permits subdividing agriculture along the traditional-modern continuum. from subsistence to commercial agriculture.

Finally, the Indians living on reservations are shown separately in the censuses.

Thus we have several components for the presentation of statistics on a traditional-modern continuum. The Indians on reservations are at one extreme, and the inhabitants of Panama City at the other. For practical purposes much of the statistics published are for the Metropolitan Area and for the remainder of the country subdivided into urban and rural. With such statistics it is possible to study the manpower and population characteristics of each component separately, and to ascertain long-time movement from traditional to modern. For example, one can study the birth rate in the subsistence farming sector, or in the wealthy white collar suburbs of Panama City. Or geographic migration of people between the largely traditional and largely modern parts can be investigated.

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This general approach was developed in connection with Panama's annual sample household survey. Because of the restricted number of cases in the sample a detailed traditional-modern continuum was not fully developed. The 1970 population census and the 1971 economic censuses would permit the construction of a more detailed continuum. However, the recommendations of international bodies were followed by the Panama Office of Statistics and Census, and statistics for such a continuum are not likely to be available, except as the investigator improvises them. If socioeconomic regions had been developed initially, statistics for such a continuum could have been prepared easily on the computer.

ECONOMIC ACTIVITY STATISTICS[4]

The generally used definitions of employment and unemployment and not economically active (or not in the labor force) were developed some decades ago in those countries which had largely moved into the modern phase. For these countries such statistics made perfectly good sense because with their aid the countries could face up to and deal with such problems as unemployment insurance, workmen's compensation and safety, retirement pensions, the establishment of employment centers, health insurance, etc. In earlier times when these countries were largely peasant agriculture (including subsistence farming), the types of problems enumerated above were unimportant to the administrators and policy makers, and little or no effort was made to collect economic activity statistics.

In the underdeveloped countries today those same problems of unemployment insurance, retirement pensions, job security, etc. are being faced in the modern components. Governments must do something about them if they wish to prevent chaos and anarchy from breaking loose. And all governments are making efforts in this direction, however tentative.

We see now how the traditional-modern continuum is important. The internationally recommended economic activity statistics are useful in the modern component and of no use in the traditional one. Hence, a national total is largely useless. But to say that these economic activity statistics are useful in the modern component is not enough; the specific use and interpretation of these statistics will vary from country to country depending on just how modern its "modern" part really is. An administrator cannot automatically interpret these data in the same manner for all developing countries.

Some Definitions and Their Implications

Before illustrating the preceding comments, let us examine the United Nations recommended definitions:[5]

"*Employed* (par. 293). The *employed* comprise all persons, including family workers, who worked during the time-reference period established for data on economic characteristics or who had a job in which they had already

[4] I am using "economic activity" as equivalent to "labor force."
[5] *Principles and Recommendations for the 1970 Population Censuses, op. cit.*

worked but from which they were temporarily absent because of illness or injury, industrial dispute, vacation or other leave of absence, absence without leave or temporary disorganization of work due to such reasons as bad weather or mechanical breakdown.

"*Unemployed* (par. 294). The *unemployed* consist of all persons who during the reference period, were not working but who were seeking work for pay or profit, including those who never worked before. Also included are persons who, during the reference period, were not seeking work because of temporary illness, because they made arrangements to start a new job subsequent to the reference period or because they were on temporary or indefinite lay-off without pay. Where employment opportunities are very limited, the unemployed should also include persons who were not working and were available for work, but were not actively seeking it because they believed that no jobs were open. The recorded data on the unemployed should distinguish persons who never worked before."

Not economically active includes people who are neither employed nor unemployed.

These definitions are applied to the population above some minimum age; the United Nations recommends 15 years.

Statistics on employment and unemployment are always collected and analyzed together with related items. The United Nations recommends occupation, industry, and status (or class of worker, as employee, self-employed, etc.). Other items often included are: amount of time (e.g. hours) worked during the reference period; if respondent worked less than full time, why; earnings; whether person worked at more than one job during reference period; etc. Taken together the battery of questions provides statistics useful for problem solving and policy formation—solutions which no one or two questions alone could ever provide.

As is evident, anyone who is self-employed and is scrounging about for a living, or who is an unpaid family worker in a family enterprise, is automatically designated as employed. Included here are subsistence farmers no matter how poor and hungry they may be, and any members of their families who are reported as helping on the farm and thus are unpaid family workers.

Therefore, one of the first sets of statistics to examine is that of class of worker, by sex, in the modern part separately from the traditional. If it is found that in the modern component of a country most of the workers are reported to be employees—i.e., wage and salary workers—we know that this country in its modern component faces about the same problems as do the developed countries, and the former's economic activity statistics can be interpreted in pretty much the same manner.

On the other hand, if the working population in the modern part consists largely of self-employed or unpaid family workers, then we must interpret the economic activity statistics somewhat differently. Through the use of other statistics and on-site inspection it can be determined that such workers are generally poor, ill-fed and ill-housed, and engaged in traditional non-agricultural activities, as hawking wares in the street, for example. We know, then, that

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these people, or very many of them, despite being classified as "employed" really are potential unemployed; if and when jobs open up many of them will rush to apply for such jobs. Clearly they exert a pressure on the modern job component; one of the most obvious ways in which such pressure often manifests itself is in lower wages paid to the employees in the truly modern job component.

In a country in which many of the workers are in cooperatives, it cannot be said *a priori* whether their conditions are more akin to employees in the modern phase or the self-employed in the traditional component, or somewhere in between. Other statistics describing the level of living of the workers and the nature of their work are needed. Also, it is necessary to know how the cooperative is organized. In an extreme case, such as the kibutz in Israel, for example, where every adult is assigned a work task, there really is no labor force which is distinct from the adult population. One cannot speak of employment and unemployment in the kibutz, and statistics on economic activity *per se* have no significance. Only such statistics as the age and sex composition of the population and the volume of output and level-of-living of the kibutz members have any significance.

Importance of Class of Worker Data

Total employment in Panama in 1968 amounted to 409,000. This is the only figure that administrators and many developmental technicians look at and thereby often draw wrong conclusions. A more meaningful analysis is had by examining the employment data by sex and class of worker. Table I shows employment in Panama by sex and class of worker, arranged in three parts, the modern, intermediate, and traditional.[6]

TABLE I

EMPLOYED, AGED 15 AND OVER, BY SEX AND CLASS OF WORKER, FOR MODERN AND TRADITIONAL COMPONENTS: REPUBLIC OF PANAMA, 1968

(numbers in thousands)

	Modern (Metro Area, Non-agr)	Intermediate (Metro Area, agr)	(Rest, non-agr)	Traditional (Rest of country, agriculture)	Total
Males	*107*	*19*	*41*	*136*	*303*
Employees	84	5	27	27	143
Self-employed	22	11	13	77	123
Unpaid family workers	1	3	1	32	37
Females	*64*	*1*	*34*	*7*	*106*
Employees	47	†	16	1	64
Self-employed	16	†	16	2	34
Unpaid family workers	1	†	2	4	7
Total	*171*	*20*	*75*	*143*	*409*

† Too few cases to show separately.

[6] Table I is a modification of Illustration No. 17 shown in United Nations *Principles and Recommendations for the 1970 Population Censuses, op. cit.*, p. 47.

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In the modern component among the men, 8 in 10 are employees, in the intermediate, about 5 in 10, and in the traditional component, 2 in 10. For these workers such problems as unemployment insurance, retirement pensions, etc. are in order and most of the workers are included in one or another Panamanian social insurance program.[7]

Furthermore, the fact that in the modern part only 2 in 10 men are not employees suggests that there are no great hordes of men scrounging around and trying to earn a living, however meagre. In the intermediate and traditional components, however, the large proportion of self-employed and unpaid family workers suggests considerable actual or potential pressure on the labor market. If and when job opportunities arose very many of these men would apply for such jobs, and as a result would probably affect the wage structure. If in addition, we recognize geographic mobility, we see that there are very large numbers of men in the intermediate and traditional components who could bring pressure on the labor market in the modern part. In the case of Panama even if only 10 or 20,000 men suddenly migrated into the Metropolitan Area (comprising most of the modern part) they could affect employment opportunities and wage rates in that area.

Among women the situation is somewhat analogous although somewhat fewer are employees. In particular, almost no women are engaged in agriculture, a topic to be discussed subsequently.

If additional statistics are introduced such as comparable data for an earlier period, and information on the age, educational, and skill levels of the population, then we have the data needed for an intelligent appraisal of the employment situation and policy formation. Unfortunately, persons concerned with these problems—officials, administrators and technicians—rarely examine such detailed statistics either because the data are not available or because of a misunderstanding of the situation.

The "Poor" Jobs

Another way of ordering and interpreting the economic activity statistics is by appropriate arrangement of the occupations. The detailed occupations (at the four or more digit level) can be arranged into three groups (or more if desired): 1) those occupations commonly found in a modern economy and associated with modern technology; 2) those of a traditional nature which are not associated with modern technology; 3) those occupations which are found in both traditional and modern economies.[8] If this is done it is then possible to measure occupational movement over time from traditional to modern, and to ascertain just how modern the "modern" component of a country really is.

[7] I am not stating the self-employed must be excluded from social insurance programs. I simply emphasize that very generally they are excluded except perhaps on a voluntary basis. Employees, or certain classes of them, on the other hand, are included by law in the social insurance programs of all countries. Governments, if they are at all concerned, seem to be more concerned with employees, at least as far as social insurance is involved.

[8] This idea is presented in considerable detail in A. J. Jaffe, *People, Jobs, and Economic Development*, (1959), Appendix D, "Suggestions for a Supplemental Grouping of the Occupational Classification System.

The International Labour Office's *International Standard Classification of Occupations* provides considerable job description on the basis of which many occupations can be allocated to this three-fold classification. The statisticians of a country, who presumably are familiar with their people, should be able to set up such a classification using the ISCO job descriptions plus local information. The occupation statistics can then be cross-classified, the three-fold classification by the ISCO or whatever classification system the country uses, plus other characteristics, as sex, class of worker, etc.

A simplified approach to this traditional-modern ordering of the occupations consists of separating out those engaged in home employment (such as sewing or shoe repair or food preparation) or in street employment (vendors of all sorts, lottery ticket salesmen, etc.). To these can be added domestic servants and related personnel (washerwomen, gardeners in private homes, etc.). These occupations are easily picked out of the ISCO list; for example 3-32, "Street Vendors, Canvassers and Newsvendors;" or 6-42, "Drivers of Animals and Animal-Drawn Vehicles;" or 7-03.55, "Weaver (carpet), Hand Loom;" etc.

Even casual inspection of such workers, many of whom may be officially employees, i.e., wage and salary workers, reveals very many of them to be poor and potential unemployed. They too exert pressure on the labor market and will apply for better jobs if and when such become available. We can illustrate with the data for the nonagricultural employed in the Republic of Panama (shown in Table II).

TABLE II

PERSONS AGED 15 AND OVER, EMPLOYED IN NONAGRICULTURE BY SEX
AND TYPE OF WORK: REPUBLIC OF PANAMA, 1960 and 1968

(numbers in thousands)

	1968	1960	Change
Males			
Total employed	148	95	53
Street and home work	7	4	3
Domestic service	1	1	0
All other	140	90	50
Females			
Total employed	98	55	43
Street and home work	16	4	12
Domestic service	28	20	8
All other	54	31	23

It is clear that among men the major increase in employment between 1960 and 1968 was in the "all other" or what we might call reasonably good jobs. Among women, however, the substantial increase in employment during this eight year period was accounted for in very large measure (almost half of the increase) by growth in street and homework and domestic service. This is not the type of increased employment which developers seek to attain.

The Traditional Sector

Heretofore we have made little mention of employment statistics in the traditional part. This is so because such figures have little meaning. In many underdeveloped countries almost all persons in the traditional component who are above 5 or 10 years of age are carrying on activities which contribute to the family livelihood and thus can be classified as employed according to the United Nations recommendations. The situation varies from country to country, of course. In countries where there are genuine landless farm workers, many individuals may be making some contribution to the family livelihood during part of the year and no contribution at other times. In such countries employment statistics may be useful, if the government intends to use them for policy formation. In that event, the procedures for collecting the data should be somewhat different from those used in the modern component. We conclude that in general, in the traditional areas, and even in the semi-traditional ones, employment and population in reality tend to be synonymous.

Problems in Ascertaining Economic Activity Status of Women

For several reasons, and the reasons must vary from country to country, it is much more difficult to ascertain employment and unemployment for women than for men. In the case of the Panamanian farm women, for example, we know that virtually all of them are engaged in agricultural activities despite the fact that upon inquiry they report not working. More intensive questioning and scrutiny of their activities reveals that they help with the farm work, and therefore could be reported as employed if social custom so condoned. Accordingly we know that the total number of women engaged in agriculture is far greater than the 7 or 8,000 as given in Table I. Indeed, the total number of persons aged 10 or 15 and over, who are living in farm households, is the best approximation to the agricultural labor force.

Within the modern nonagricultural component it is difficult to count all the part time and intermittent women workers, in Latin America at least. This is particularly so if they are self-employed. The tendency is to report "housewife" status; probing enumeration is often necessary to elicit the fact that they do engage in remunerative work. Furthermore, in underdeveloped countries there is considerable "inactive job seeking,"[9] especially among women, so that the unemployment rate for women is far from precise.

In summary, in order to interpret the economic activity statistics correctly and draw the proper policy implications from them, the data for men and women must be examined separately. Administrators generally prefer combining the statistics into a "uni-sex series."

Recommendation

My second recommendation is to the effect that potential consumers of these data, such as Mr. Black, become fully aware of the nature of the basic statistics and what they mean.

[9] Measurement of "inactive job seeking" is very difficult, and probably no country has solved the measurement problem on a practical and continuing basis. Hence the reported unemployment rate is virtually always below what the true rate would be if the latter could be measured.

Equally important, if not more so, the so-called "experts" should become aware of the United Nations definitions of employment and unemployment. For example, William H. Bartsch of the International Labour Office wrote (*International Development Review*, Vol. XIII, No. 1, 1971/1):

> "Simply stated, it is the writer's (and others') view that the definitions and concepts of unemployment formulated in developed countries are poor techniques for determining the true degree of worklessness in less developed countries where quite different socioeconomic conditions prevail.
> *Conventional Definitions of Unemployment*
> Definitions of unemployment generally require that to be recorded as unemployed, a respondent must also be taking active measures to find employment during a specific reference period, usually the week preceding the enumerator's call. Yet those familiar with the socioeconomic realities of less developed countries know that considerable numbers of persons seeking work may not take active steps to find employment because they believe that no work opportunities in their region exist . . . "

If Mr. Bartsch had read the United Nations definition previously given it would have been quite clear to him that inactive unemployed are to be included. That most countries do not do this is a result of administrative failure rather than a shortcoming in the definition.

HOUSEHOLD AND/OR FAMILY STATISTICS[10]

Although virtually everyone agrees that the family is the basic social unit in all societies, most statisticians choose not to present demographic and economic activity statistics based on this unit. For purposes of developmental analysis the importance lies in the traditional-modern continuum. In the traditional society the family (nuclear and extended) is self-sufficient and provides all the necessities, both physical and psychological, which the individual members require. The state plays almost no part in contributing to the family's welfare although it may avail itself of some of the family's labor.

In a modern society, on the other hand, the family (which tends to be nuclear rather than extended) is much less self-sufficient and can provide for only part of its members' needs. The government or other organizations must provide services to supplement those which the family provides. For example, there are neither nursery centers nor retirement pensions in a traditional society; they are found only in a transitional or modern society.

A number of series of demographic and economic activity statistics could be presented which would measure a variety of aspects of the traditional modern continuum, and which also would provide the basis for making policy decisions. For example, statistics can be assembled on "who supports persons too old to work?" Or data on family employment and earnings. Even such simple information as the number of families headed by women could be useful.

[10] For the United Nations definitions see *Principles and Recommendations for the 1970 Population Censuses, op. cit.*, pars. 213 to 221 inclusive. For present purposes we are using the two terms interchangeably although a purist statistician may wish to present separate statistics.

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TABLE III

FAMILIES CLASSIFIED BY TYPE OF ECONOMIC ACTIVITY:* REPUBLIC OF PANAMA, 1964 AND 1968

	More Modern Component: Cities of Panama and Colon			More Traditional Component: Rest of Country			Total		
	1968	1964	Change	1968	1964	Change	1968	1964	Change
Total	96	88	8	174	151	23	270	239	31
All employed members engaged in agriculture	1	1	0	92	97	−5	93	98	−5
All are self-employed or unpaid family workers	†	†	†	73	81	−8	73	81	−8
Various class of worker combinations	†	†	†	19	16	3	19	16	3
All employed members engaged in nonagriculture	86	76	10	52	33	19	138	109	29
All are self-employed or unpaid family workers	12	10	2	15	9	6	27	19	8
All are employees	60	57	3	28	21	7	88	78	10
Various class of worker combinations	14	9	5	9	3	6	23	12	11
Some members engaged in agriculture and some in non-agriculture	†	†	†	18	11	7	18	11	7
No one in family employed	9	11	−2	12	10	2	21	21	0

* The families were classified on the basis of industry and class of worker information for all members of the family reported as employed.

† Too few cases to show separately.

An Example of Family Statistics for Panama

In Panama an attempt was made to characterize families by the type of economic activity in which the members were engaged. The resulting statistics for 1964 and 1968 are shown in Table III. The data indicate that outside of the cities of Panama and Colon there was a decrease in the number of families dependent on agriculture, and increases in the numbers dependent on non-agriculture, or a combination of agriculture and nonagriculture. Some movement out of the traditional components, particularly out of semi-subsistence agriculture, seems to have occurred over the four years. In some farm families one or more members have obtained nonagricultural jobs (often in a nearby town). Other farm families seem to have become self-employed and/or unpiad family workers in nonagriculture; how much of an improvement this may be over semi-subsistence agriculture is not clear.

Within the cities of Panama and Colon there apparently was little change between 1964 and 1968. Other statistics, particularly on family income, are required to detect possible changes. Families, all of whose employed members were wage and salary workers, did receive increased income during this period. The median family incomes were: families having a male head, $41, in 1964 and $56 in 1968; families having a female head, $23 in 1964 and $35 in 1968.

Unfortunately, international agencies have not stressed enough the importance of household and/or family statistics. The basic United Nations document, *Principles and Recommendations for the 1970 Population Censuses*, summarizing as it does the distilled wisdom of the members of the United Nations Statistical and Population Commissions, recommends only one table for household statistics, namely, size of household.

Comments regarding the significance of family statistics are contained in *An Integrated System of Demographic, Manpower and Social Statistics and its Links with the system of National Economic Accounts*.[11] However, this document was not designed for the instruction of statisticians on how to prepare and interpret family statistics and thus has no influence on data already available or which may become available in the next several decades.

Recommendation

My third recommendation is that far more attention be paid by the international agencies to devising more and better household and/or family tabulations. The required basic statistics are already being collected; they need only be put together intelligently.

[11] United Nations Economic and Social Council, Statistical Commission, E/CN.3/394, May 28 1970; see chapters XIV and XV.