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Evaluation of  
the  
Census Bureau's  
Computation and Analysis of Population Data Project  
932-0649  
financed by the  
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Report prepared by

Dr. John Kantner  
Dr. Dudley Kirk  
Dr. Thomas Pullum  
Dr. Jeanne Siquefield  
Mr. Parker Mauldin, Chairman

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## INTRODUCTION

At the request of the Office of Population of the United States Agency for International Development five demographers have undertaken an evaluation of the Bureau of the Census's activities relating to population estimates funded by USAID and called "Computation and Analysis of Population Data Project 932-0649." Formal arrangements were made by the American Public Health Association in conformance with its agreement with USAID, AID/pha/C-1100. The individuals undertaking the evaluation, for convenience called the Committee in this report, were:

1. Professor John F. Kantner, Department of Population Dynamics, The Johns Hopkins University, Baltimore, Maryland.
2. Professor Dudley Kirk, Food Research Institute, Stanford University, Stanford, California.
3. Professor Thomas W. Pullum, Center for the Study of Demography and Ecology, University of Washington, Seattle, Washington.
4. Dr. Jeanne Siquefield, Chicago, Illinois
5. Mr. W. Parker Mauldin, Senior Fellow, The Population Council, New York, New York.

Mr. Mauldin served as Chairman of the Committee. Dr. Louise Williams, Office of Population, USAID, served as liaison to facilitate work of the Committee.

The entire Committee met in Washington May 17 and 18, and two members again on June 7. Interviews were held with personnel in USAID from Regional Bureaus, and the Office of Population, and Mr. Sander Levin, Assistant Administrator, USAID, the Coordinator of Population, Ambassador Benedict, and his demographic associate in the State Department, personnel from Bureau of the Census, the Population Reference Bureau, and of the Committee on Demography and Population of the National Academy of Sciences, the Population Council, the Statistical Office and the Population Division of the United Nations, the Foreign Agricultural Service, and the Council on Environmental Quality, and the World Bank.

We were provided with a large number of reports prepared by the Bureau of the Census under the terms of their agreement with USAID and with a sizable number of memoranda and related materials, including an internal evaluation within the Bureau of Census in 1975 of some of the materials produced under an earlier, similar agreement with USAID.

Scope of the Evaluation: We were asked to undertake a full and extensive evaluation, to look into any aspect of the project that we wished, with the evaluation to include consideration of the following questions:

- a. "How complete are the Census Bureau's Data compilation efforts? Do they succeed in obtaining all important data sets? Are there important data sets they have missed?
- b. "Does the Census Bureau obtain data on a timely basis, that is, as soon as they become available or is there undue delay?
- c. "The Census Bureau routinely evaluates and adjusts data for assumed under or over count. Are the techniques they use sound? Are their adjustments based on reasonable judgments about demographic development? Do the evaluation estimates and adjustments result in high quality demographic estimates?
- d. "How efficient is the Census Bureau operation? Is the amount and quality of work consistent with the staffing pattern? The budget?
- e. "Does the Census Bureau fairly present all important demographic information, including alternative data sets? Are the reports well designed to facilitate use by both technical and lay readers? Do the reports contain adequate graphic presentation?
- f. "Are data compiled by the Census Bureau fully available to AID and other users? Do these procedures actually work in practice?
- g. "There have been a series of indications that demographic data and analysis by the Census Bureau have been incorporated into high level assessments of the world or an individual country situation. Do these assessments fairly represent the situations in these countries and in the world? Some of the reports in question are classified and thus may not be available to the team, but the team should address this vital question to the extent possible. We may wish to request declassification of the documents."

We believe that our report addresses all but the last question.

The only report of another agency we have seen that incorporates demographic data and analysis by the Census Bureau in high level assessment of

the world or an individual country situation is U.S. International Population Policy, Third Annual Report of the NSC Ad Hoc Group on Population Policy, Department of State, January 1979. The report cites the Bureau of the Census as one of its sources of data, and personnel in the State Department report that the Bureau of the Census is an "invaluable" source of current demographic data. The report U.S. International Population Policy is itself a fine report and does "fairly represent the situations... in the world." But this single example cannot be considered as seriously addressing question "g" above.

#### SCOPE OF WORK

The Scope of Work specified in the 1978 and 1979 agreements between USAID and the Bureau of the Census is quite similar except that in 1978 a statistical information service was included but was not in the 1979 agreement. The scope of work specifies that the development and maintenance of a comprehensive demographic data base will include the compilation of a master set of general demographic data in a consistent time series, the evaluation of those data for errors, inaccuracies, and inconsistencies in reporting, and the adjustment of such data where feasible. The data to be collected include total population, rates of natural increase, crude birth and death rates, and age specific fertility rates. It is specified that emphasis will be placed on estimation of fertility, and a variety of estimation techniques shall be utilized to estimate fertility, mortality and growth rates from incomplete or supplementary data. Source notes, which are to accompany the data, are to include the method of data collection, the organization(s) responsible for data collection, analytical and adjustment techniques applied, who performed analysis and/or adjustments, empirical evidence of data reliability, and other evidence of reliability. The 1979, but not the 1978, agreement states that data con-

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tained in the data base shall be provided on special request to AID contractors, other federal agencies, and the general public.

Both the 1978 and 1979 agreements call for a report on World Population for all countries and regions of the world, and for ten country profiles. The 1978 agreement lists 18 countries to be considered for the Country Profile series, but the final list is to be determined jointly between the two organizations. In 1979 seven specific countries are listed for the Country Profile series, and an additional six to be determined by AID and Census jointly from among 12 specific countries -- but as is stated above it is specified that ten profiles should be ready for publication or published during 1979.

Both agreements state that "In addition, special ad hoc reports shall be provided as requested by AID and agreed upon by the Census Bureau."

#### DATA BASE

The Bureau of the Census has a very comprehensive collection of population data for almost all countries of the world including censuses, vital registration reports, and significant sample surveys. The staff has established a good network of contacts in many foreign countries, with the United Nations, and with other groups. As a consequence of those contacts and diligent attention to continually updating their holdings, their files are for the most part quite current. A number of other organizations rely on the Census Bureau for current information and often check with the Census for data and to check estimates and reports from other sources.

An extensive review especially of the publication, World Population, 1977, by members of the Committee came to the conclusion that the Census does in fact do a good job considering the magnitude of the task. Some omissions and errors are bound to occur in such an enterprise. In intense questioning at the Bureau, the members of the Committee were satisfied

that the Bureau personnel were aware of anomalies that had been picked up in an earlier, less intensive review of World Population, 1977, and had plausible (though sometimes disputable) explanations for the data presented or omitted (See Table 1 for a comparison of estimates of population totals by different organizations).

In its files the Census has built up a major capital asset which in the view of the Committee has not been so fully utilized as it might be. The Census maintains files on every country in the world. Its publications are but the tip of the iceberg.

It is true that the Bureau's compilations are not always timely. AID has made much of specific cases where the Bureau may have been slow to get (or to accept) recent data. This sort of sharpshooting is easy where (1) the information flow is primarily unidirectional, the Census not having ready access to AID files, and (2) the Bureau must cover such a wide perimeter of countries, and (3) a wide range of topics.

Quality of Data Used

We have made an effort to assess the quality of the basic data which are used in the Country Profiles. For this purpose we have examined all of the Profiles and have solicited the judgments of the NAS and PRB staff. Separate discussion of the World Population 1977 values is not required on this point for those countries which already have their own Profiles, because both are drawn from the same Census Bureau files. The same procedures are assumed to apply as well to those countries not yet profiled. Because of a shortage of time and because of logistical problems, we have not consulted the files on each country. However, these files would not be of major pertinence, since our interest is in the final selection and presentation of data.

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Our expectations in this area are as follows:

1. The Bureau of the Census should have certain universalistic criteria for the quality of data acceptable for its purposes. As a result, some countries may have several data sets which are acceptable -- even if they do not all agree precisely -- and some countries may have no data of acceptable quality.
2. These criteria, and the procedures by which the data are determined to satisfy them, should be communicated to users.
3. These criteria and procedures should correspond closely with those employed by the larger demographic community.
4. Even data of acceptable quality may require adjustment. Any adjustments, and the reasons for making them, should be communicated to users. This final point will be treated separately in the present report.

Examination of the Country Profiles and World Population 1977 shows that the data sources are of three main types. The first is national censuses, sometimes from as long ago as 1950 but generally no older than 1960, and ranging as near to the present as possible. The second source is vital registration data for births and deaths; the third consists of various demographic and fertility surveys, used in fewer than half of the countries.

The Profiles consistently report the value of the United Nations Age-Sex Accuracy Index for each census, and rate the census in terms of the standard adjectives suggested by the United Nations. With almost no exceptions, any census since 1950 is used regardless of the value of this summary measure of accuracy. An exception is Kenya, whose 1962 census count is not used, but for other reasons. Nearly all census data are adjusted, sometimes by the country, on the basis of Post-Enumeration Surveys, and sometimes by the Census Bureau, on the basis of internal evidence.

In terms of our three criteria, the Census Bureau probably should go beyond the UN Age-Sex Accuracy Index in evaluating census data. It is not clear from the text of the Profiles that the country's own post-

enumeration surveys, where available, have been used to evaluate the census data in detail. It does not appear that the basic demographic data in a sample survey would ever be considered to be superior to corresponding data from a census; at any rate, the Bureau's practice is to defer to census data. 7

The use of census data (after adjustment), no matter how poor it appears to be, can be defended on the grounds that a poor estimate is better than no estimate at all. We agree with this principle. However, we recommend the following: (a) that the quality of census data be evaluated in more depth than is possible with the Age-Sex Accuracy Index; (b) that these checks be reported fully in an appendix; (c) that if the data in a table are known to be of particularly poor quality, even if adjusted, then the number of significant digits be kept to a minimum and a note of warning should accompany that specific table; (d) and that there be a greater willingness to substitute sample survey data for census data if the former appear to be of better quality.

Turning next to the registration data, the Profiles frequently refer to the existence of such data but usually do not use them, because of under-reporting of births and deaths. When such data are used, it is usually after adjustment. The practices regarding registration data appear fully justified.

Finally, a fraction of the countries have sample survey results in their Profiles. So far as we can determine, these surveys are usually incorporated through reports by other researchers, e.g., through the tabulations in a report on a National demographic survey. In some cases, however, some new tabulations or an adaptation of several tabulations will appear in a Profile. In either case, the data tend to be taken at face value. We find little specific evidence that the Census

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Bureau staff have themselves attempted to evaluate the quality of a country survey. (Of course, there may be some surveys which have been evaluated and rejected without any reference). We recommend that this area be given more attention, and that the Bureau develop the expertise to conduct its own, independent, evaluation of survey data. It would be helpful if the Profiles were to list the pertinent data sets which they have examined but declined to use for reasons of poor quality. Naturally, we would not suggest that such an activity become burdensome, and gratuitous criticism of some unused data could be offensive. But it would be desirable for the Bureau to forestall objections that it is ignorant of relevant data. It may also happen that a systematic evaluation of additional data sources would in fact uncover some new acceptable sources.

We noted that some A.I.D. staff believe that the Bureau is not using all available data, such as prevalence of contraceptive use. The Bureau staff have responded to us that they do not consider such data to be of adequate quality for the generation of fertility rates. We believe it would be desirable for the Bureau to prepare a formal assessment of such data sets for a few countries. (At least five profiles quote the USAID Family Planning Service Statistics, apparently without evaluation or adjustment.)

These comments may be briefly summarized with reference to the expectations at the beginning of this section. First, the Bureau does appear to apply the same basic criteria for quality to all countries. Their policy tends to favor census data over other sources, and often the data are heavily adjusted when a case could be made for disregarding them entirely. More measures than just the Age-Sex Accuracy Index should be computed and reported. Evaluation could sometimes result in a preference for sample over census data.

Second, regarding documentation of data checks, these have been inadequate in most of the Profiles. We welcome the new technical appendices in the forthcoming Profiles for Mexico, Indonesia, Nepal, and Colombia. This new format presents the user with a more satisfactory discussion.

Our third major expectation was that the relevant procedures and conclusions would be generally accepted to be of a high standard. Our evaluation here is based more on the conclusions than on the specific procedures, because we do not feel that the latter have been adequately conveyed in most of the Profiles. The professional demographic staff of the National Academy of Sciences and of the Population Reference Bureau gave us a very strong endorsement of the Census Bureau's decisions on data quality. Asked whether the Bureau's criteria might be too stringent or conservative regarding sample survey data, both commented that they regarded some conservatism as essential but that the Bureau policy was not conservative to the point of indicating a bias. As for the members of this team, we concur unanimously that the Bureau's conclusions about data quality are of high professional standards using methods accepted by nearly all demographers who work with data from developing countries.

#### PUBLICATIONS

A list of reports published since January 1, 1977 or in preparation by the Census Bureau International Demographic Data Center is given below:

#### Series ISP-30/ISP-DP -- Country Demographic Profiles

- No. 4 - Costa Rica
- No. 5 - Ghana
- No. 6 - Guatemala
- No. 7 - Panama
- No. 8 - Sri Lanka
- No. 9 - Jamaica
- No. 10 - Honduras
- No. 11 - Kenya
- No. 12 - Republic of China
- No. 13 - Chile
- No. 15 - Thailand
- No. 16 - India
- No. 17 - Republic of Korea
- No. 18 - Indonesia

Series ISP-RD -- International Research Documents

- No. 5 - Measurement of Infant Mortality in Less Developed Countries
- No. 6 - Afghanistan: A Demographic Uncertainty

Series ISP-WP -- World Population Reports

- World Population 1977 -- Advance Report -- Recent Demographic Estimates for the Countries and Regions of the World
- World Population 1977 -- Recent Demographic Estimates for the Countries and Regions of the World
- World Population 1977 -- Statistics in Brief

Series ISP-WC -- World Maps

- Countries of the World: Year of latest Population Census
- World Population Growth Pattern, 1976
- World Fertility Pattern 1976
- World Mortality Pattern, 1976

Series P-23 -- Current Population Reports

- No. 79 -- Illustrative Projections of World Populations to the 21st Century

Completed Country Demographic Profiles in Review

- Mexico
- Colombia
- Nepal

Special Studies (Available but still in preparation for formal publication)

Infant and Child Mortality in Selected Latin American Countries. (Solicited paper by the World Health Organization for a publication as a contribution for the Year of the Child.)

The Changing Mortality Pattern in Latin America. (To be published in the International Research Documents Series)

An Approach for Estimating Fertility from Census and/or Survey Information on Children Ever Born by Age of Mother. (Presented to the 1975 PAA conference and to be published in the International Research Documents Series)

Other Staff Papers in Progress

Differentials in Childhood Mortality in Selected Asian Countries. (Solicited paper for the conference Socioeconomic Determinants and Consequences of Mortality organized by the World Health Organization.) Mexico June 1979.

The Impact of Changes in Marital Status on Vital Rates and Their Measurement in Morocco -- A Simulation Study

The Use of the Beers Method for Splitting Age Groups into Single Years of

Compendium of Age-Specific Fertility Rates for Developing Countries Since 1960

Key Factors in Simulating Fertility Change: A Sensitivity Analysis of TABRAP and CONVERSE Models.

ANALYSIS OF REPORTS

Consistency and Validity of Census Procedures:

(a) Within Country Analysis: These appear to be generally consistent, though the very wide range of methods employed make it impossible for an outside committee to check many countries thoroughly. In meeting with Census staff the Committee was impressed by the awareness of the staff of anomalies in the country presentations. In almost all cases (of a dozen or so brought to their attention) the Census staff was fully aware of the anomaly and had rational reasons for the form of presentation. Agreement or disagreement is a matter of judgment and taste. In no case did our Committee find errors or dubious professional judgment in World Population, 1977 so serious that the general presentation for a country was vitiated by internal inconsistencies in the presentation. On the other hand, differences of opinion and interpretations regarding data are inevitable in a blanket presentation of this type for 150 LDC countries, most of which have poor official data or none at all.

In fact, there have been relatively few seriously controversial presentations (i.e., Colombia, Egypt, Indonesia, Philippines, Thailand) that have been picked up by AID and have been pointed out in comparisons of AID and Census estimates of current fertility. [This is in a period of some 4-5 years of bureaucratic bickering.]

(b) Between Countries: Comparison of the presentations between countries is not easy because the Census staff has been properly opportunistic in the analytical methods employed. The analytical methods aim at internal rather than external consistency. Sources of inconsistency include the following:

(1) different corrections for underenumeration of population and underregistration of births. In Asia and Latin America correction for underenumeration range from 0 (21 cases) to 12.5 percent in Honduras. Of 53 larger countries reviewed (e.g., omitting smaller Caribbean and Pacific island countries), 21 were not corrected; four corrections were under 1 percent, 12 less than 3 percent, 22 less than 5 percent and 10 were over 5 percent. Corrections for underregistration of births and deaths were understandably much more variable, ranging from one percent correction to 53 percent. In our judgment these corrections had little relation to reality in comparisons across the board and were simply dependent on the availability of relatively "hard" data.

The Bureau's penchant for "adjusting" population counts sometimes weakens comparability with other sources and between countries in its own analysis. From one point of view the Bureau's conscientious interest in "doing it own thing" is good -- it leads to independent estimates, probably in the right direction. However, it may also lead to non-comparability with other reputable sources. The corrections for underenumeration are sometimes of little utility. When the United States Census is identified as having a 3 percent undercount it does not change the basis of analysis but uses the census returns uncorrected.

The validity of the Census presentation may be checked against the few completed studies of the Committee on Population and Demography of the National Academy of Sciences (NAS). Those immediately available to the Committee were countries #1,2 and 3, Republic of Korea, Thailand and Honduras. These may not be cited directly in their preliminary versions. However, it may be said that the results do not differ markedly from those of the Bureau. For Honduras the NAS

by the NAS study than given by the Census Bureau. The estimated rates of growth are similar as are the  $e_0$ , infant mortality, and estimated population under age 15.

The Profile for Thailand was published in 1978 and presents data for 1976 and earlier. The 1976 crude birth rate is given as 35-36. The report World Population: 1977, published in October 1978, gives a crude birth rate for 1976 of 32-35, which is in agreement with the forthcoming report of the NAS. One of the members of the Committee published early in 1976 a CBR of 34 for Thailand for 1974. A "range" of 35-36 seems unnecessarily narrow -- one might as well choose a single figure -- and it seems to us that there was evidence at the time the Profile was published that the CBR for Thailand might be below 35. But the differences in the various estimates are small and there still is not adequate basis for a specific rate.

The comparability of the Census and NAS for Korea (e. 1975) is difficult. The Census Bureau has made upward correction of 6.2% of enumerated population as of the Korean census of 1975. The NAS does not attempt to estimate the total figure, although it does give estimates of underenumeration of females by age relative to earlier census counts. However, the overall pictures presented by the Census Benchmark data are not a serious misrepresentation.

The Census has often been accused of reluctance to use or rely on national survey data such as those obtained in the World Fertility Survey. This seems to be true historically if less so at the present time. Reliance on national surveys for recent dates could simplify the Bureau's activities in reducing footnoting as presently encumbers the text of Census profiles.

(c) Comparison of AID and Census CBRs is made in Meyer Zitter's memorandum to R.T. Ravenholt of March 12, 1969 (also see Table 2). Of 163 countries compared, 101 AID estimates fell within the range provided by the Census; in 34 cases the AID figures was below the Census range; and in 28 cases the AID estimate was

above the Census range. Fourteen of the AID estimates that fell below the Census range are smaller island countries of the Caribbean and of Oceania. If these small island countries are omitted the comparative figures are 25 cases in which the AID estimate is below the range of Census estimates and 25 in which the AID estimate exceeds the Census estimates.

In a comparison of the 36 larger countries (i.e., over 10 million) CBRs estimated by the Census Bureau were higher than the AID estimates in 20 cases, lower in 9, indicating that the most important differences in estimates are among the larger countries. The most spectacular is China, in which the AID estimates the CBR at about half the level estimated by the Census and far below other agencies, except the World Watch Institute (see Table 1). While the gaps are not so great, the differences are significant in other major countries, viz. Colombia, India, Indonesia, Korea (North and South), Mexico, Thailand, and Turkey. The gaps are crucial in terms of measuring fertility declines in these important countries. Unfortunately, the comparison in the Census Bureau's memo of March 12, 1979 does not give detailed sources for the AID estimates. This would appear to be another example of the one way direction of communication between the Census Bureau and AID the latter apparently offering information only at the stage of publication review in hopes of ambushing the Bureau at that time.

Country Demographic Profiles

The above discussion relates primarily to the large volume, World Population: 1977. Other publications, specifically the Census Profiles, have not been reviewed so systematically. This series, beginning with publication in August 1977, generally contain recent "benchmark" data, though owing to the inevitable delays in preparation and publication, these do not always include the latest data available at the time of publication. Serious errata are handled with errata tables inserted after publication.

The order and subjects of some 22-24 tables is standardized, presumably for comparison and probably because the files by country follow this arrangement.

There are usually three or four appendix tables presenting the uncorrected census data by ages and projections for population, vital rates and expectation of life at birth, a very desirable feature. For earlier profiles the text is also much standardized, the same paragraph and sentence arrangement often literally the same with only the name of the country and the dates of census changed. The profiles are well-documented with footnotes and usually making use of the most reliable international and national sources. However, the methodology employed is sometimes too complex and particularistic, to fully describe even in cumbersome footnotes.

The order of tables is maintained even where some of the basic data are missing or unavailable (e.g., in the profile for Kenya, for which only 16 tables are given). From the viewpoint of the outside user the profile on the Republic of China (Taiwan) is especially valuable because of the boycott of Taiwanese data forced on the United Nations by the People's Republic (PRC). On the other hand it is realized that the ROC is of less interest to AID since it has no program there.

While the basic framework of text tables was maintained for the Thailand profile issued in April 1978, additional appendix tables were added to present data from the Thai national surveys providing data on more recent fertility -- this presumably as the result of pressure from AID. The revised practice was continued in the Korean profile (issued in June 1978) and in the Indian profile (issued in November 1978). Furthermore, in the latter the text is prefaced by a brief half page of "Highlights," a modest concession to the size and importance of India! Later the text subsides into the literally standardized language in the Introduction and Sources and Quality of the Data.

The unpublished profiles for Colombia and Indonesia present detailed text tables in the same order of subjects as are all the previous profiles. The desirable introduction of Technical Notes offered an opportunity to reduce the ponderous footnotes to text tables, but thus far these remain.

We believe it would be very desirable to have several (perhaps 10) pages of analysis for each country. Such a discussion could verbally summarize the demographic levels and trends, place the country in its regional context, relate the data to changes in socioeconomic development, availability of family planning services, etc.

This team considers it highly desirable to have a standard tabulation plan, as is largely the case with the Profiles, if the user is to be able to do general analysis. We favor this policy but recommend a little more flexibility. The Bureau should add a few more country-specific tables in the course of preparing each profile. As near as possible, variables and categories should be the same within and across reports, but beyond a standard set some extra tables could be added.

Altogether, members of the Committee were concerned by the inflexibility of the Census Bureau in both the form and substance of the Profiles. More textual discussion, more discussion of the particular circumstances of the country concerned and reduction of the inappropriate "fine tuning" (in view of the basic unreliability of much of the LDC data) by the Bureau is in order.

#### Special Topics and Problems

(a) Projections: The Census uses long-term projections (often with inevitable dubious assumptions) to make short-term estimates. This is also a practice of the United Nations. The Committee finds this a dubious procedure.

The most disturbing example of this practice is the Census publication, Projections of the Rural and Urban Populations of Colombia 1965-2000, International Research Document, #3, issued in December 1975. Already prior to the time of publication Colombia's population had fallen below the lowest of four projections intended to give a range for 1975. Likewise CBRs had fallen below the lowest four projections prior to the issuance of the publication.

A simpler procedure of population estimation for dates a few years after

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the country's most recent census would be in order, for example, simple extrapolations of recent trends of birth and death rates. If age distributions are really needed for the most recent date (often only a few years after a census) component projections are obviously required.

(b) "Adjustments": Some members of the Committee were disturbed by the adjustments for censuses as noted above. These lead to noncomparability with national data from other sources and create problems of consistency of treatment. There is certainly no reason to suppose that those countries without "adjustments" have better data or that the corrections represent a consistent measure of the real deficiencies. It seems to the Committee that it would be desirable to impose some limit on "adjustments," for example omit census corrections of the total population of less than 3 or 5 percent unless adjustments are made in the official publications of the countries concerned.

Correction of vital statistics, if usable at all, is a different matter. For most LDCs it is not really a matter of correcting defective vital statistics but of determining estimates of vital rates from other indirect means. In this one area the Bureau does show flexibility -- variable mixes of more or less standard procedures usually tailored to what are viewed as the best techniques with defective data at hand. Despite copious footnotes the user is faced with a complexity of analytical operations that he usually cannot fully replicate. This has given rise to understandable pleas from AID for fuller explanations that have resulted in the rather ponderous Profile for Indonesia. Here the reader is overpowered by footnotes and 25 tables with only 3 (single space) pages of rather stereotyped text and preceded by a one page (single space) summary of "Highlights." A comparison with C. Chandrasekaran's report to the World Bank on Population Trends and Prospects in Indonesia suggests a more attractive and meaningful presentation in which the reader is apprised of corrections without massive footnotes.

(c) Infant Mortality: A rather casual review of the International

Research Document #5, Measurement of Infant Mortality in Less Developed Countries, issued in August 1978 indicates that this is a useful publication, albeit understandably pessimistic about the accuracy of techniques now employed. Members of the Committee agree with the conclusion that an annual publication on reductions of infant mortality would serve no purpose inasmuch as annual data are not commonly available in LDCs.

Infant mortality is one of the most difficult parameters to measure. In most LDCs it must usually be estimated by assuming some relationship of infant and child mortality to estimates of adult mortality. A graphic comparison of  $e_0$  and infant mortality in Latin America by a member of the Committee indicates that in this region, at least, the relationships between these two variables is reasonably consistent from country to country. There are very few distant outliers, the most conspicuous being Guatemala with a listed  $e_0$  of 53 and a dubious figure of 75 for infant mortality.

(d) Bracketed Estimates of CBRs, CDRs, and r: To the Committee this does not seem a matter of great importance. A bracket signals to the reader that the estimated rates are only approximate and/or are based on "soft" data. However, persons wishing to pile data on vital statistics into a computer understandably find this annoying and in any case will usually take a midpoint. In view of the single figures given for other data (e.g., in the World Population compendia) it does suggest unique caution and sensitivity in the census presentation of this particular set of parameters.

(e) Methodology: The Bureau of course finds itself torn between the need for simplicity in presentation and the complexities of "fine tuning." The Bureau has clearly opted for the latter, but also conscientiously published "raw" uncorrected official data so that the user may see the effects of its corrections.

Insofar as it was possible in the time available, World Population, 1977 and the various Profiles were reviewed in terms of methods employed. In gen-

eral, standard demographic methods were used but often in a mix that is hard to evaluate since it differs from country to country. It is not surprising that AID should find this frustrating and demand a single statement of methods employed. Unfortunately, such a statement is not possible with the diversity and complexity of methods employed.

The most serious error in methodology noted by the members of the Committee is in International Research Document #6, Afghanistan: A Demographic Uncertainty, issued September 1978. An inspection and comparison of the Bureau's estimates and those prepared by James Trussell and Eleanor Brown (Demography 16(1) February 1979) show marked differences in estimates of mortality. Trussell and Brown give  $e_0$  values of 37 for the rural population (i.e., most of the population) and 48 for urban. The Bureau gives figures of 34 for males and 36 for females. Examination of the Bureau's methodology reveals that the implied difference is chiefly due to misuse of the logit procedure (cf. Figures 1 and 2 of the Census report) which artificially produced substantially higher mortality than the accepted methodologies. Members of the Committee can elaborate this point more fully if desired. This error does suggest the need for avoiding "trendy" statistical techniques unless fully understood.

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**TABLE 1**  
**Population Estimates**  
**1975**  
**(millions)**

	<u>World</u>	<u>China</u>	<u>World less China</u>
United Nations <sup>1/</sup>	3968	839	3129
U.S. Bureau of the Census <sup>2/</sup>	4090	943	3147
U.S. AID	(a) 3985 (b) 4044	(a) 876 (b) 934	(a) 3109 (b) 3110
World Bank <sup>4/</sup> , 1976	4033	897	3142
Population Council <sup>5/</sup>	3964	830	3134
Population Reference Bureau <sup>6/</sup>	3967	823	3144
Community & Family Study Center, University of Chicago <sup>7/</sup>	4017	897	
World Watch <sup>8/</sup>	3920	823	3097
Environmental Fund <sup>9/</sup>	4147	987	3160
Range	3920-4147	823-987	3097-3160
Amount of Range	227	164	63
Mean	4014	885	3130
% Range	5.4	18.8	2.0

- 1/ United Nations, The World Population Situation in 1977, Depart. of International Economic and Social Affairs, Population Studies No. 63, New York, 1979, pp. 8, 15.
- 2/ U.S. Bureau of the Census, World Population 1977, Washington, D.C., October 1978,
- 3/ James W. Brackett, "World Fertility 1976: An Analysis of Data Sources and Trends," George Washington University Medical Center, Population Reports, Series J, No. 12, November 1976, p. J-212.
- 4/ World Bank, as reported in U.S. Bureau of the Census, op. cit., Table 9, p. 72.
- 5/ Dorothy L. Nortman and Ellen Hofstatter, "Population and Family Planning Programs," (8th edition), New York: Population Council, Reports on Population/Family Planning No. 2 (Eighth Edition), October 1976, Table 1 and 3, pp. 5, 11.
- 6/ Population Reference Bureau, 1975 World Population Data Sheet, Washington, D.C., 1977.
- 7/ Community and Family Study Center, University of Chicago, Projected Population of the World, Regions and Nations for the Year 2000, February 1978.
- 8/ Lester Brown, World Population Trends: Signs of Hope, Signs of Stress, World Watch Paper No. 8, Washington, D.C., October 1976, pp. 33, 35.
- 9/ Environmental Fund, World Population Estimates, 1977, Washington, D.C., 1977.

Table 2

Estimates of Crude Birth Rates in the World and the Major Regions, c. 1975  
(Annual Rates per 1000 Population)

	United Nations <sup>1/</sup>	U.S. Bureau of the Census <sup>2/</sup>	U.S. Agency for International Development <sup>3/</sup>	Population Reference Bureau <sup>4/</sup>	Environmental Fund <sup>4/</sup>	World Watch Institute <sup>4/</sup>
		(1976)				
World	31	29-33 (30)	27	30	34	28
More developed countries	17	16 (16)	16	16	16	16
Less developed countries	37	34-39 (36)	31	35	40	33
Africa	46	45-48 (47)	45	45	46	47
Asia	34	32-37 (34)	27	32	38	30
East Asia	25	21-22 <sup>4/</sup>	15	26	34	20
Peoples Rep. of China	26	26-36 (28)	14	27	36	19
Southeast Asia	42	35-39	37	38	43	39
South Asia	41	38-39	37	37	42	37
Southwest Asia	42	40	39	42	43	42
Europe	16	16	16	16	16	16
Latin America	37	34-37 (37)	35	36	37	36
North America	17	15 (15)	-	15	14	15
Oceania	25	21-22	-	22	22	17 <sup>5/</sup>

United Nations, World Population Prospects as Assessed in 1973, Population Studies No. 60, New York, 1977, Table 8, p. 20 (1975 estimated as average of medium variant projections for 1970-75 and 1975-80).

Census, op. cit., p. 14. Bracketed figures are single point estimates for 1975 made in Bureau of the Census, Illustrative Projections of World Populations to the 21st Century, Special Studies Series P-23, No. 79.

Roger Kramer and Samuel Baum, Comparison of Recent Estimates of World Population Growth (unpublished 1978).

Sources: See notes to Table 1.

Low because author apparently overlooked less developed islands of Oceania.

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**NO.** 22 and 23

## COST EFFECTIVENESS AND TIME FLOW OF ACTIVITIES

This section of the evaluation will examine activities of the International Demographic Data Center (IDDC) from a quantitative, cost effective view rather than a qualitative view. It will compare the work done, with the work requested under the RSSA and their costs.

RSSA No. BUCEN 3-78 is a three year contract, covering fiscal 1978-80. The major purpose of the contract is for the "compilation and analysis of population data." The total budget was \$900,000 for fiscal 1978, \$880,000 for fiscal 1979 and an estimated \$1,100,000 for fiscal 1980. This budget supports a staff of 16 professionals and 11 support staff. (See Appendix A for details on staff by GS rating and salary.) The section on personnel will examine the qualifications of this staff, in terms of technical and professional background.

The major activity supported by this contract is "the development and maintenance of a comprehensive demographic data base," with "emphasis being placed on estimation of fertility." Program output was to consist of, but not be limited to the following:

1. World Population 1977 (to be published FY 1978) and 1979 (to be published 1980).
2. Country demographic profiles - 10 either "ready for publication or published" each year. Countries listed for FY 1978 were Philippines, Bangladesh, Pakistan, Colombia, Dominican Republic, Malaysia, Nepal, Bolivia, El Salvador, Paraguay, Morocco, Tunisia, Turkey, Senegal, Burma, Zaire, Algeria and Cameroon as those to be considered. For FY 1979 the list of countries included Colombia, Malaysia, Morocco, Nepal, Pakistan, Egypt, and Paraguay, for which profiles are to be prepared and Afghanistan, Bangladesh, Bolivia, Philippines, Turkey, El Salvador, Peru, Tanzania, Senegal, Burma, Zaire, Algeria, and Cameroon are to be considered.
3. Monthly update reports containing all newly available data on total population size and levels and trends of fertility and mortality.

4. Quarterly reports including a brief budget review, status report and prospectus on upcoming activities.
5. Copies of trip reports.
6. Also "special ad hoc reports shall be provided as requested by AID and agreed upon by the Census Bureau."

Samuel Baum provided a "ballpark" estimate of allocation of staff time to various activities. His allocation was:

a. Maintain data base and generate World Population 1977 and 1979	31%
b. Country demographic profiles	20%
c. Special projects and research papers	18%
d. Ad hoc requests	11%
e. Computer programming	3%
f. Miscellaneous (consulting, meetings, advice and training)	17%

The staff is organized into two branches under the general direction of Samuel Baum. The Data Evaluation Branch has 7 professionals (5 M.A.'s and 2 Ph.D.) with 5-6 support staff. The Demographic Analysis Branch consists of 8 professionals with 5-6 support staff (5 M.A.'s and 3 Ph.D.).

To properly evaluate their accomplishments the following questions must be answered:

1. Has BUCEN satisfied its contractual agreement with AID as specified in the RSSA No. BUCEN 3-78?
2. Has the work completed under the RSSA been cost and time effective?

The following categories of work will be evaluated: a) maintenance of data base and generation of World Population 1977 and 1979. b) country demographic profiles c) special projects and research papers; d) ad hoc requests and e) travel.

#### A. Demographic Data Bank

Thirty-one percent of staff time has been allocated to maintaining the Demographic Data Bank and to generating the World Population Report 1977 (published in 1978) and continuing work on the World Population Report to be finished during FY 1979 and published 1980. This means approximately 5 man years of professional labor was needed. Since this is the major activity of the contract, this seems a reasonable allocation (if anything it could be too small). The cost is estimated as \$279,000 for FY 1978. For this activity BUCEN has met the contractual agreement and been both cost/time efficient.

#### B. Country Demographic Profiles

Twenty percent of staff time has been spent upon the preparation and publication of country profiles. During FY 1978 10 country profiles were published, and as of May 1979 4 drafts have been completed for FY 1979. The monthly and quarterly activity reports of the ISPC will be used to examine the work done on the country profiles. Tables 3-5 summarize the monthly activity reports in regard to number of months in which specific countries were worked on. Information on FY 1977 is presented to determine what work was accomplished as part of this contract, and what was essentially completed prior to the start of this contract (which in a sense is a continuation of an earlier contract).

First, a little background on the country profiles is needed. Work on the country profiles began prior to FY 1977, with three being published in FY 1977 with 33 being promised at one time (see Memos between Lawson and Sprehe). In the past, BUCEN has had troubles in reaching its goals of country profiles and in estimating the time required to prepare a profile.

For FY 1978, 10 country profiles were published. Approximately 3/4 of the work on these profiles was completed prior to the start of this new contract. Work on these ten profiles constituted an estimated 37% of all work on country profiles in FY 1978 (see Tables 3-4). The cost of a country profile was roughly estimated at \$27,000.00 ( $\$900,000 \times .2 \times .37 / (10 \times 4)$ ). Since FY 1979 is not complete, and only 1 profile has so far been published, it is not possible to make the same calculation for FY 1979. The fact that all work on the published profiles began before FY 1978 should not be a matter of concern; inasmuch as this contract is a continuation of prior contract overlap of work is reasonable.

A more serious problem with the work completed on country profiles in FY 1978, is that of the 10 published not a single one was specified in the RSSA as "those to be considered...and to be ready for publication or published during FY 1978." Table 3 shows that BUCEN spent 58% and 32% of profile work on countries not mentioned in the RSSA. In FY 1978 (see Table 4) the monthly reports mentioned 19 countries that were worked on of which 8 were listed in the RSSA. During FY 1979, 12 countries were worked on (up to May 1979) of which 8 were mentioned in the RSSA. Based on the Census Bureau's projected work schedule 9 country profiles will be finished, six of which are mentioned in the RSSA.

Although there are a number of reasons why work planned for a year and more ahead is postponed or set aside (slower processing and release of data than hoped for, for example) there has now been sufficient experience in the planning and preparation of such reports that one would expect a closer correspondence in the future between countries listed in the RSSA for consideration and work completed.

Besides considering which profiles are produced, we also looked at how they were produced (by whom and over what time period). Of the 10 profiles published, 8 professionals were mentioned as authors out of 16 professionals. Two persons wrote half of the publications. The total time between beginning work on a profile and its completion is long. Of those published in FY 1978, 9 of the drafts were finished prior to June 1977 and 6 prior to December 1976. The average number of times a country was mentioned as being worked on by the monthly report was 12.2. This excludes time spent in external review. The monitor, Sarah Green felt that a profile could be written and reviewed and ready for publication in six months. This seems optimistic but double that figure should be feasible. Procedures for writing, review and revision should be carefully reviewed, and streamlined, especially if the reports are to be timely.

#### C. Special Projects and Research Papers

Eighteen percent of staff time was spent on special projects and research papers. This resulted in the publication since January 1977 of 2 research documents ("Measurement of Infant Mortality in LDC's" and "Afghanistan: A Demographic Uncertainty"), one population report ("Illustrative Projections of World Populations to the 21st Century"), and 2 papers (presented at meetings but not published). Five more papers are in progress. The cost for this work is approximately \$283 thousand dollars, and this does not seem to be cost effective. The paper on infant mortality was requested by the Program, Policy and Coordination of AID, and the projections by Ambassador Green of the State Department and the Council on Environmental Quality. However, there was little enthusiasm by the Office of Population for this work, given its special interest in fertility.

#### D. Ad Hoc Requests

Eleven percent of staff time is spent on responding to ad hoc requests by AID and the general public, other government agencies, and outside organizations and institutions. A majority of ad hoc requests did not come from AID. (For examples of ad hoc requests see monthly activity reports.) AID has expressed concern in the past that too much time has been spent on this activity, with it interfering with the completion of work on the profiles and special AID ad hoc reports. The Bureau of the Census believes strongly that they have a basic obligation to provide information to other government agencies and to the public upon request. Moreover, as is pointed out later, agencies such as the State Department and PRB are heavily dependent on the Bureau of the Census for many data.

The crux of the problem is the poor relations between AID's Office of Population and ISPC at Bureau of the Census. Currently all requests from AID to BUCEN are funneled through the monitor. BUCEN then provides the answers, or for extensive projects provides estimates of the time needed to provide results. The monitor then responds to the requestor. This lack of direct interaction is probably making things worse. AID Office of Population is now going to other organizations (e.g., Population Reference Bureau, or other AID contractors) to fill their ad hoc requests. Curiously these other AID contractors obtain much, and probably most, of the necessary information from BUCEN.

It is not clear what could be done to solve this problem. The ISPC has stated to the evaluators that it is ready and willing to respond to any request from AID. However, Mr. Brackett of AID stated that the response in the past has been unsatisfactory. Obviously under these circumstances BUCEN is unable to meet the ad hoc needs of AID. Therefore money spent on this activity is

obviously not cost efficient from the point of view of the Office of Population. (We are talking about \$164,000 spent so far under the contract).

#### E. Travel and Other Activities

BUCEN spent a considerable amount of time on what was classified as other activities (17%). Approximate costs are \$268,000. A large part of this activity was spent in traveling to Asia, Latin America and Africa for meetings and visits to obtain more recent demographic data. There has been considerable criticism of the type of travel done by Mr. Brackett and less so by Sarah Green within AID. One criticism often made about Census travel is that a large part of it is to international meetings and less to individual countries to work directly with those responsible for data gathering and analysis. The Census response is that one can meet statistical personnel from a number of countries at international meetings where one can obtain as much information about the types of data being collected and the schedule for their release as if one were in the country. Moreover, there is a fortuitous element about timing of a visit because delays in data processing are frequent. Even so, it is the Committee's feeling that more travel to individual countries and normally to more than one country per trip would be rewarding. A second criticism has been that junior professionals, particularly those responsible for preparing Profiles, travel little relative to the travel of senior personnel. The matter is moot given the advantages of continuing contact with statistical personnel around the world which suggests that a few persons might more efficiently travel in a given area than to assign travel to a larger number of persons.

A proper evaluation of other activities which are included under the Miscellaneous category is difficult, due to the lack of "real" output. However, BUCEN is spending a considerable amount of time on activities other

than their main emphasis of the demographic data bank profiles and ad hoc requests (i.e., 25%).

F. Conclusions

BUCEN: There was not close correspondence between the RSSA No. BUCEN 3-78 and in FY 1978, they did not publish any profiles that were listed in the RSSA. For FY 1979, it appears that they will complete only 6 profiles that are listed in the RSSA. Second, because of the poor working relations between AID and ISPC, the ad hoc needs of AID are not being met; however, the PRB contract may largely meet such needs. Third, trips could include more "on site" visits than in the past.

Months<sup>1</sup> of Work on Country Profiles by Country by Fiscal Year  
of Work and Date Country Profile Published/Completed.

Country	FY 1977	FY 1978	FY 1979*	Total	Date Pub/Comp
<b>Asia</b>					
India <sup>5</sup>	7	7	1	15	11/78
Indonesia <sup>5</sup>	7	6	6	19	9/78 (draft)
Jordan <sup>5</sup>	2	0	0	2	
Korea <sup>5</sup>	11	7	-	18	6/78
Malaysia <sup>3</sup>	2	4	-7	13	
Morocco <sup>3</sup>	4	5	7	16	
Nepal <sup>3</sup>	3	8	7	18	5/79 (draft)
Pakistan <sup>2, 3</sup>	-	3	7	10	
Philippines <sup>3, 5</sup>	1	1	0	2	
Sri Lanka <sup>5</sup>	10	1	-	11	11/78
Taiwan <sup>5</sup>	7	3	-	10	2/78
Thailand <sup>5</sup>	9	7	-	16	4/78
Turkey <sup>2, 3</sup>	-	2	2	4	
<b>Latin America</b>					
Brazil <sup>5</sup>	5	8	6	17	
Chile <sup>5</sup>	7	1	-	8	2/78
Colombia <sup>2, 3</sup>	-	4	5	9	4/79 (draft)
Honduras <sup>5</sup>	11	1	-	12	12/77
Jamaica <sup>5</sup>	12	0	-	12	11/77
Mexico <sup>5</sup>	6	2	5	13	3/79 (draft)
Panama <sup>5</sup>	9	0	-	9	10/77
Paraguay <sup>2, 3</sup>	-	4	2	6	
<b>Africa</b>					
Kenya <sup>2, 3</sup>	10	1	-	11	1/78
Egypt <sup>2, 3</sup>	-	-	1	1	
<b>Total</b>	<b>123</b>	<b>75</b>	<b>56</b>	<b>254</b>	
<b>Total RSSA<sup>4</sup></b>	<b>-</b>	<b>31 (41%)</b>	<b>38 (68%)</b>	<b>131 (52%)</b>	

1. "Months" - is the total number of months in which country was mentioned in International Demographic Statistics Monthly Activity Report, i.e., month in which "work continued on preparation, review, revision and/or publication of Country Demographic Profile."
2. Work on country profile began under current contract, i.e., not a continuation of prior work.
3. Country listed in RSSA agreement between AID and Bureau of the Census as candidate for a country profile.
4. Months of work spent on countries listed in RSSA agreement between AID AND Bureau of the Census.

\* Incomplete. 10/78 - 4/79

5. Country profiles for these countries were sent out for external review before 6/76. See monthly report.

Table 4

Total Number of Countries in which Work on Country Profiles Was Reported in Fiscal 1978 (10/77-9/78) and 1979 (10/78-4/79)

	<u>FY 1978</u>	<u>FY 1979</u>
Total	19	12
Old* Countries	15	7
New* Countries	4	5
Total listed in RSSA**	8	8
Old* Countries	4	3
New* Countries	4	5
Total published/completed	10	4 (drafts)
Total listed in RSSA**	0	2
Total not listed in RSSA**	10	2

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\* "Old" — work on country profile was begun prior to current contract.  
 "New" — work on country profile began under current contract.

\*\* The RSSA lists 18 countries in FY 1978 and 20 countries in FY 1979 as candidates for country profiles, with at least 10 country profiles to be completed from the list each year under the contract.

Note: This table is based on International Demographic Statistics Monthly Activity Report compiled by Samuel Baum Asst. Chief, International Demographic Statistics, 10/77-4/79.

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Authors of Country Profiles: Workload Distribution  
FY 1978

<u>Name</u>	<u>Countries</u>	<u>Number</u>	<u>Comments</u>
Sam Baum	All	10	General Direction
Edvardo Arriaga	Panama, Sri Lanka* Honduras, India	4	Supervision
Ellen Jamison	Sri Lanka*, Jamaica** Thailand*	3	Supervision
Sylvia Quick	Jamaica*, Rep. of China Thailand, *Rep. of Korea	4	Supervision
Glenda Finch	Honduras, Taiwan, Korea	3	
Nancy Frank	India*	1/2	
Larry Heligman	Panama, Jamaica**	1 1/3	
Frank Hobbs	India*	1/2	
Timothy Markell	Sri Lanka*	1/2	
Sylvia Quick	Kenya, Chile	2	
Marilyn Sharit	Sri Lanka, *Jamaica**	5/6	
James Spitler	Jamaica, ** Thailand	1 1/3	

Note: FY 1978 budget list 16 professionals, and 11 support staff. Of this 16, 8 worked on country profile during FY 1978. Two individuals were responsible for half the profiles.

Country Profiles Finished Prior to Fiscal Year 1978

Ghana	9/77	(Patricia Morgan)
Costa Rica	8/77	(Sylvia Quick)
Guatemala	9/77	(Sylvia Quick)

\*Worked on by 2 people

\*\*Worked on by 3 people

## SERVICE TO USERS

Significant users of the Census Bureau population data for various countries include the State Department, the Population Reference Bureau, the Committee on Population and Demography of the National Academy of Sciences, the World Bank, the Foreign Agricultural Service of the Department of Agriculture, the Council on Environmental Quality, the Population Council, and, to some extent, the United Nations. No doubt there are other organizations which also use Census data but the Committee limited itself to interviews with personnel in the listed organizations.

Comments about the utility of the Census data and the cooperativeness of the staff were uniformly positive and were described in terms such as:

Quite reliable, dependable, comprehensive, cooperative, invaluable, a very important resource, couldn't do our work without them, and so on.

Most users rated the Census Bureau high on timeliness of data, including the State Department, PRB, NAS, and UN, but some, such as the World Bank replied, not always completely up to date, but they are very thorough, have detailed information that is of much help.

Some specific comments follow:

- NAS: They are very, very useful to us. Their files are very good and contain data from different sources, estimates made by different groups, and this saved us weeks of work. They have a very good depository and are very helpful in giving us access to their holdings.
- PRB: The Bureau of the Census is a very important supplier of data to us. We have lots of interaction with them and we couldn't do much of the work we do if they were not responsive to our requests.
- UN Population Division: They are very good, very fine; we like them very much. They are very, very cooperative and we find it useful to exchange information, detailed information. We have an excellent relationship. They publish information as soon as they get it; we think of them as being fast. Sometimes we are faster; sometimes they are faster. The quality of their work is fine.

State Department: In many ways, Sam Baum and his group serve as the staff we need but can't afford. They are invaluable. We have tried to depend on the UN but their data often are out of date before they are published and they are not as up to date on evaluation of recent data as is the Bureau of the Census. For current data we rely on the Bureau of the Census. Their work is dependable; they are meticulous, and that is an institutional requirement.

World Bank: We call on them very regularly and they are up to date - well, not always quite up to date but they are good on details, are quite reliable, dependable. They are very useful, helpful, and are always cooperative.

Foreign Agricultural Service: USAID has been giving us population figures rather than let us select. I wish we could use the Bureau of the Census figures. AID has doodled the figures we get, and sometimes they doodled them in strange ways. They drove us crazy. We need one set of figures furnished by a responsible body such as the Bureau of the Census.

Council on Environmental Quality: The Bureau of the Census was the most professional and did far and away the best job of any agency that provided inputs to our undertaking. They recognized the importance of our project and of meeting deadlines; they assigned good people, provided excellent graphics, and did a first-rate professional job.

The summary for this part of the report is easy - the Bureau of the Census has a comprehensive holding of population data for almost all countries of the world, that holding is well documented, and is, at a minimum, up to date in most instances. Many organizations need the kind of data provided by the Census, they use the data, and they find the Census staff cooperative, knowledgeable and helpful.

## IDDC Personnel

1. Implicit in the scope of this evaluation is an assessment of the size and quality of the IDDC staff. To answer the questions put to the Committee about the thoroughness of IDDC's data compilation efforts, the timeliness of its output, the soundness of its techniques, and the operations's general usefulness is, among other issues, to raise questions about the staff. Moreover, the Committee has been asked explicitly to comment on whether "the amount and quality of work [is] consistent with the staffing pattern." While there is ample opportunity for experts to disagree over particular estimates, there should be less argument as to the competence and professionalism of those who make the estimates. We leave aside for the moment the question of whether the Census Bureau staff has been responsive to A.I.D. requirements, cooperative in its dealings with the project monitor and other agency staff. Here the question is the appropriateness of the IDDC staff in both numbers and professional skill for the job it has contracted to do.

2. Buried in this question is the difficult issue of how to reconcile the public service philosophy of the Bureau of the Census with the restricted responsibility preferred by the A.I.D. Office of Population which feels that it is paying for certain products and services and should not be subsidizing the Bureau in meeting information requests from other agencies of government and from the public. The resolution of this question has obvious implications for the size of the IDDC staff. The view taken here is that IDDC has no choice but to act within the Census tradition as a widely accessible source of information. The size of its professional staff will inevitably reflect this institutional responsibility but the size of the RSSA need not. It would help to clear the air if some part of the IDDC staff budget could be supported by Bureau funds in recognition of activities that go beyond those for which A.I.D would be a likely sponsor.

It is not suggested that personnel be assigned duties in terms of the source of their support, be it A.I.D., Census or other. Requests for information gravitate to the experts and thus the entire staff is at risk of involvement in activity of this kind.

3. Another hidden issue is travel. Despite complaints that the IDDC staff travels excessively, the Committee feels that more travel by analysts in the course of preparing their reports would be highly beneficial. However, increased travel would be demanding of staff time and though it might result occasionally in some efficiencies in acquiring data, the net effect would seem to be to increase the amount of professional time per unit of output. This needs to be kept in mind as staff requirements are being considered.

#### Staff Organization

4. IDDC consists of two branches, one for Data Evaluation and one for Data Analysis. Each branch has 6 to 7 professionals plus support staff for a total roster of 28. For the most part the analysts have had advanced training in demographic analysis. Among them are 10 with the M.A. degree, 3 ABDs and 3 Ph.D.s In addition, there are available in other parts of the Bureau professionals in data collection and analysis with whom the staff can and do consult. The Committee met only with Mr. Baum, the Assistant Chief for International Demographic Statistics, Ms. Jamison, Chief of the Demographic Analysis Branch and Ms. Quick who is Acting Chief of the Data Evaluation Branch. We did, however, examine publications put out by this group and, while it is difficult to identify individual contributions, the current operation can fairly be characterized as highly competent. There is little evidence of pathbreaking activity that would advance the art of demographic estimation and analysis but, as an operation geared to the production of demographic statistics, it bears the hallmarks of thoroughness and professional integrity.

The senior staff have been at the Bureau a long time. The junior staff for the most part are relatively new to the Bureau, having been recruited by IDDC. Only one of the present group has been transferred to IDDC from another part of Census. This is important to note since it has been charged that the Bureau has tended to "unload" its less able personnel on IDDC.

5. Mr. Baum would like to see an increase of about 50 percent in the IDDC staff. About two-thirds of the increase would be in the professional grades. This would be a substantial expansion justified, in his view, by the need for more analysis of migration and urban growth and of manpower and employment. He also feels the need for more "in depth studies" of particular countries and greater area specialization on the part of his analysts. This plan was put to A.I.D. some time ago but received little encouragement there. From comments made to some members of the Committee by Ambassador Benedick, greater attention to urban growth and, perforce, manpower problems would fill a currently unmet need of the Office of the Coordinator of Population Affairs. It is the Committee's opinion also that IDDC should take a greater responsibility for innovative methodological work, a development which could be of great importance after the NAS project is disbanded.

6. The Committee believes these new directions in the activity of IDDC to be desirable. The questions are how much staff expansion would they require and who should pay for them. With respect to the latter question, it would appear consistent with the Office of Population's interests to encourage greater methodological development in this area. Personalities aside, that indeed is the crux of the problem between Census and the Agency -- disagreement over methodology. Moreover, A.I.D., if not the Office of Population, has interests which would be served by better information and analysis of the redistribution and structural changes of LCD populations.

7. On the question of additions to the IDDC staff, it seems reasonable that greater methodological analysis would require some new personnel for a total of, say, two to three professional devoting themselves to this area. It might be noted that there are methodological issues to be dealt with in connection with estimates of parameters other than those related to the rate of natural increase.

8. The Committee does not feel that it can comment in more than a tentative fashion about the size of the current staff in relation to the work it now performs. Our impression is that it is not understrength and, in fact, if the pace of output could be accelerated, some time might be available for exploring new problems. We are mindful that additional travel might add some tautness to the time budget. Thus, the Committee sees nothing grossly out of line in the size of the organization and its current workload. It is conceivable that more opportunities to travel, some expansion in the range of topics dealt with, and somewhat greater area of specialization might provide conditions conducive to enhanced productivity insofar as the work became more challenging and the analyst more directly involved.

1. The Census Bureau should be regarded as having a vital capital asset in its comprehensive coverage and files relating to some 150 less developed countries, and to a less extent of some 50 more developed countries. This data base is:

- of high quality
- easily accessible
- readily and quickly shared with other government agencies, Aid contractors, and other agencies
- updated continuously and, by and large, on a timely basis.

In short, this data base is a major resource that is generously shared, and is much used by a number of U.S. government agencies, by the Population Reference Bureau, and others.

2. The Census Bureau should not be expected to provide an "early warning system" of fertility and mortality changes but rather should serve as a back-up for that function, now presumably a responsibility of the Population Reference Bureau.

3. The quality of work of the Census Bureau is generally high -- it bears the hallmarks of thoroughness and professional integrity -- and this view is shared by professional demographers in several organizations including those in the Committee on Population and Demography of the National Academy of Sciences, the Population Reference Bureau, the State Department, the World Bank, and the Population Division of the United Nations. The staff working on this project can be described as competent, although there is little evidence of pathbreaking activity that would advance the art of demographic estimation and analysis.

4. In general, the Bureau of the Census rates well on timeliness, that is on the acquisitions for its files of the most recent demographic data for various countries, although here the record is somewhat mixed. Our impression is that a few years ago the Census did less well on timeliness and that it now puts more effort into keeping abreast with developments, and with ~~moderate~~ <sup>adequate</sup> success.

5. The report World Population 1977 is well done and timely; the quality of data is high, although naturally in such a comprehensive volume some individual figures are disputable. One of the principal tables presents population and growth rates for each calendar year from 1950 to 1977. It is suggested that crude birth and crude death rates be added in future publications and that the last year of the projected estimates include at least the year in which the publication is issued, and perhaps a year or two beyond. For example, a report for the year 1979 should also contain estimates of the total population for 1980.

6. The Profiles contain much useful information and the quality of data is high. However, we believe this series could be substantially improved, and we suggest that consideration be given to:

- A. Modifying the profiles to reflect the size and importance of the country (e.g., India obviously should have a fuller and more comprehensive presentation than Honduras). Inclusion of data on large cities would be useful to some readers.
- B. Including several, perhaps up to 10, pages of analysis for each country. Such an analysis could summarize the demographic levels and trends, place the country in its regional context, relate the data to changes in socioeconomic development, availability of family planning services, etc.
- C. Reducing the number of "adjustments" of total population, typically relegating such adjustments to footnotes. We note that the RSSA states that the Bureau of the Census is ". . . to adjust such data where feasible" but it is somewhat fortuitous as to which countries have data that permit adjustment. Such adjustments tend to lessen comparability with other sources except in cases where the country involved has itself made adjustments.
- D. Introducing more flexibility in the data presented, dependent upon the kinds of data that are available for a given country and, in the case of large countries, its regions.

- E. Changing procedures of short-terms projections to much simpler extrapolations from current data on vital rates and population growth rather than basing them on long-term multiple projections. / ?
- F. Evaluating the quality of census data in more depth than is possible with the Age-Sex Accuracy Index.
- G. Reporting these checks fully in an appendix.
- H. Including more of the detailed notes relating to quality of the data in the appendix rather than with the tables themselves.
- I. Reducing the time gap between beginning work on a Profile and its publication; a reasonable goal would be publication within not more than 12 months after formal beginning of the work.
- J. More careful planning of the work so that there is much closer correspondence between countries listed for consideration for Profiles in the RSSA and preparation/publication of the Profiles.

7. With the objective of a more thorough professional review of publications such as the Profiles and special publications, we suggest that the Census provide an honorarium to one or two reviewers per publication for their reviews. The existing practice of requesting suggestions from a number of individuals and agencies could of course be continued. It is clear from the correspondence, however, that the present system often produces rather meager and quite casual comments.

8. In at least two of the six International Research Documents the presentations were of questionable value owing to errors of judgment (Colombia) or methodology (Afghanistan). This underscores the importance of point 7 above.

9. USAID is to be commended for including the following in the 1979 RSSA: "Data contained in the demographic data base shall be provided on special request to AID, AID contractors, other federal agencies, and the general public." It is also highly desirable that the Department of Commerce provide funds to the Bureau of the Census for such activities.

10. The Committee does not feel that it can comment in more than a tentative fashion about the size of the current staff in relation to the work it performs. Our impression is that it is not understrength and, in fact, if the pace of output could be accelerated, some time might be available for exploring new problems.

11. Three criticisms have been made regarding travel of the Census staff: they travel too much, attend too many international conferences, and junior staff - analysts writing the Profiles - should do a larger proportion of the travelling. The Committee disagrees with the first criticism. We observe that the Census states that the primary reasons for attendance at international meetings is that one can meet statistical personnel from a number of countries and thereby obtain more information in a single trip about the types of data being collected and the schedule for their release than by visiting several countries. Moreover, there is a fortuitous element about timing of a visit because delays in data processing are frequent. It is the Committee's feeling that more travel to individual countries and normally to more than one country per trip would be rewarding. The third criticism is moot given the advantages of continuing contact with statistical personnel around the world which suggests that a few persons might more efficiently travel in a given area than to assign travel to a larger number of persons.

However, we suggest that consideration be given to more travel by the staff responsible for compilation and analysis of data for specific countries.

12. It has been suggested that the Census group should devote more attention to urban growth and manpower problems. Also, there will be a need for more attention to innovative methodological work after the NAS project is discontinued. The Committee is sympathetic with the Census Bureau meeting these needs, and feels that it is in the interests of the Office of Population to encourage greater methodological development. The addition of, say, two professionals for this purpose could help to meet some of these needs.

13. Both the Office of Population of AID and Census seem to have magnified their differences out of proportion. Members of the Committee were rather surprised to find how few countries were in serious dispute between the parties to the agreement during the past five years. A somewhat more understanding attitude on the part of the Office of Population, coupled with greater flexibility at the Census Bureau, would seem to offer a basis for reasonable compromise and cooperation.