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THE CENTER FOR INTERNATIONAL RESEARCH/U.S.
CENSUS BUREAU: AN ASSESSMENT OF ITS RESOURCES
SUPPORT SERVICES AGREEMENT WITH THE U.S.
AGENCY FOR INTERNATIONAL DEVELOPMENT

by

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FIGURE II.1 Structure and Staff of the U. S. Census Bureau Center for International Research

TABLE II.1 Center for International Research Funding

GLOSSARY

AID	U. S. Agency for International Development (Washington office)
BuCEN	U. S. Census Bureau
CDC	U. S. Centers for Disease Control
CDPA	Computer Programs for Demographic Analysis (a Manual published by CIR in 1976)
CIR	Center for International Research for BuCEN
CPS	Contraceptive Prevalence Survey
DDD	Demographic Data for Development (a project funded by POP)
IDA	Intensive Demographic Applications (a proposed CIR activity to service LDCs)
IDB	International Data Base (a computerized file of demographic and socio-economic data maintained by CIR)
IDDC	International Demographic Data Center (predecessor to CIR)
ISPC	International Statistical Programs Center of BuCEN
LDC	Less Developed Country
POP	Office of Population
RSSA	Resources Support Services Agreement (between government agencies)
TA	Technical Assistance
UN	United Nations
USAID	U. S. Agency for International Development (overseas mission)
WFS	World Fertility Survey
WID	Women in Development (an office within AID)

EXECUTIVE SUMMARY

An evaluation team of three demographers was recruited to assess the performance of the U. S. Census Bureau Center for International Research (CIR) under its Resources Support Services Agreement (RSSA, BST-3000-R-CA-2242) with the Office of Population (POP) of the U. S. Agency for International Development (AID). The RSSA is part of POP's Demographic Data for Development (DDD) project. The team conducted an on-site review in Washington, D.C. during October 15-19, 1985. It also conducted interviews with other producers and consumers of the demographic and socio-economic data with which CIR is involved.

The scope of the team's assignment was to assess CIR's performance under the RSSA in order to provide guidance on AID's future relations with CIR. Although AID provides only nine percent of CIR's current budget of \$3.7 million, this is an important component of funding for maintenance and dissemination of CIR's evaluated, computerized International Data Base (IDB). The technical competence of CIR staff was impressive, as was its total productivity and the quality of its work. In addition, staff members have made extensive contributions to the demographic literature derived from research pursued on their own time.

To fulfill its mandate, the team considered the overall activities of the CIR, investigated the structure and data retrieval aspects of the computerized IDB; reviewed the publication and dissemination of CIR's work and products; and considered CIR's liaison with donors, collaborators, clients, and competitors.

CIR has fulfilled its major directive under the RSSA, namely to compile and assess demographic and related socio-economic data for all countries in the world, and to work to disseminate it. The computerized IDB is a reasonably up-to-date, competently evaluated data set, probably superior to statistics produced by the U. N. Population Division and the World Bank, the two other major producers of demographic data.

The weaknesses in CIR's work vis-a-vis AID are (1) the limited information in the IDB on contraceptive prevalence and detailed fertility rates; (2) CIR's sporadic, limited, and not very attractive publications, which fail to do justice to the quality and richness of the IDB; and (3) the limited direct communication between POP and the CIR.

All three problems are remediable. The CIR was very receptive to the team's suggestion that it pursue and evaluate data on contraceptive prevalence with the same vigor and interest it gives to more traditional demographic variables. Further development of the structure of the IDB and additional computer software -- to generate a pre-selected listing or grouping of countries and cross-classification of variables, for example -- would also be beneficial. The CIR also acknowledges its weakness in dissemination, specifically that its publications have been too irregular, more descriptive than analytical, and not attractively packaged.

Another area of potential interest to AID would be greater utilization of CIR staff to train LDC nationals in demographic techniques and analysis. The CIR not only has the technical competence for this role, but since its sister organization in the Census Bureau, the International Statistical Programs Center (ISPC),

provides technical assistance to conduct censuses and surveys, CIR is a natural unit to provide technical assistance for the analysis of those data.

With new leadership at CIR and POP, the time is auspicious for the two agencies to reconsider their relationship and to expand the frequency and channels of communication between them. AID could direct to CIR its ad hoc requests requiring sophisticated demographic expertise while CIR would be better positioned to do policy-relevant research if it had more frequent, direct communication with AID/Washington and field staff.

Stressing the above observations and recommendations, the team recommends that AID continue under the DDD follow-on project to fund CIR at the present or somewhat higher level of \$300,000 per year.

I. INTRODUCTION AND BACKGROUND

I.1 Background

For over 17 years the U. S. Agency for International Development (AID) has been providing support to the U. S. Census Bureau (BuCEN) for compiling, evaluating, and analyzing demographic data from various sources around the world. BuCEN technical assistance (TA) to less developed countries (LDC) for this type of activity dates from the 1950s when LDCs developed serious interest in modern census taking.

In 1982 authority for AID-funded BuCEN activities was embodied in a Resources Support Services Agreement (RSSA), BST-3000-R-CA-2242. This RSSA, which is part of AID's Office of Population (POP) Demographic Data for Development (DDD) Project (932-3000),¹ has two components: one provides support to BuCEN's International Statistical Programs Center (ISPC), the other to BuCEN's Center for International Research (CIR). In 1985, the CIR operated with a total budget of \$3.7 million of which \$340,000 or 9.2 percent was provided by AID's Office of Population (POP). Since 1982 POP has obligated \$2,797,000 to the Census Bureau. Of this total, \$1,165,000 or about \$300,000 annually has gone to support the activities of the CIR, with the remaining funds used to support the ISPC.

This report is an evaluation of CIR's performance under the RSSA. It was prepared by an external evaluation team of three demographers recruited by the International Science and Technology Institute (ISTI), Washington, D.C., at the request of POP.

I.2 Team Composition

Members of the evaluation team were:

Ms. Dorothy L. Nortman, (Team Leader), Senior Consultant, The Population Council, New York;

Dr. John B. Casterline, Assistant Professor of Sociology, Brown University, Providence, Rhode Island; and

Dr. John A. Ross, Professor, Columbia University, Center for Population and Family Health, New York.

Dr. John G. Crowley, Social Science Analyst in the AID/POP Policy Development Division, served as liaison to brief and facilitate work of the team.

1. The other organizations funded under the DDD Project are the Westinghouse Health Systems, Columbia, MD, and the East-West Population Institute, Honolulu, Hawaii.

I.3 Scope of Assignment

The scope of the team's assignment was to assess CIR's performance under the RSSA and to provide guidance on AID's future relations with CIR. In briefing sessions with POP, it was made clear to the team that it was to orient its evaluation more to the future than the past. That is, while the team was expected to assess past performance and output, it was to focus on the underlying purpose of the evaluation, namely to identify areas of CIR expertise that could be of future benefit and service to AID. The team was asked to keep this objective in mind as it examined the following four major CIR activities specified in the RSSA:

1. to develop and maintain an up-to-date, comprehensive worldwide population data base;
2. to computerize demographic and socio-economic data, with particular emphasis on AID priority countries;
3. to respond to ad hoc requests for data from LCDs, AID, and AID cooperating agencies; and
4. to respond to ad hoc request from LDCs for assistance in the compilation, evaluation, and analysis of demographic data.

Finally, the team was asked to assess whether CIR activities reflect the best match possible between CIR skills and experience and the program needs of POP. The specific questions addressed to the team in the scope of the assignment are presented in Appendix A.

I.4 On-Site Review

The team met in Washington, D.C. for a four-day site visit during October 15-19, 1985 inclusive. The first day's agenda was as follows:

1. Briefing session with POP staff (in Rosslyn, Virginia);
2. Site visit with AID Women in Development (WID)¹ staff (in State Department building in Washington);
3. Meeting with Dr. Richard B. Sturgis, Director, Westinghouse Health Systems component of DDD Project (in POP office); and
4. Team discussion (evening session).

The intensive site visit with CIR staff took place October 16 and 17, 1985, in CIR's office in Suitland, Maryland. Team members received a well-catalogued, heavy briefing book on CIR organizational structure, personnel, funding, publications, computer data base input and output, staff papers, and current and

1. This visit related to the contract between AID/WID Office and the CIR under which the latter prepared five regional publications on women. As will be discussed in Section V.2.1, the team judged these recent publications to be excellent, both in substance and style.

proposed activities. Proceedings were very well organized, the agenda consisting of staff presentations of CIR's work, facilities, and liaison with other organizations. With presentations precise and to the point, the team had ample opportunity to raise questions and examine documents and facilities. On the final day, October 18, the team met again with POP staff; interviewed Althea L. Hill, Demographer, Population, Health and Nutrition Projects Department at the World Bank; and pursued contacts with the Population Reference Bureau (PRB) and other Washington-based organizations via telephone. Subsequently, United Nations personnel concerned with demographic statistics were also interviewed, namely Mr. William Seltzer, Chief, Demographic and Social Statistics Office, and Donald F. Heisel, Acting Assistant Director, Population Division.

II. OVERVIEW OF CIR ACTIVITIES

II.1 On-Going Activities

Over the past 17 years, CIR has been servicing AID by its compilation and analysis of demographic levels and trends in LDCs. The following activities and considerations uniquely qualify CIR to perform this service.

- (a) As a BuCEN agency, CIR is in an advantageous position to obtain unpublished as well as published data from national offices and research institutions;
- (b) Through staff attendance at international conferences as well as visits by foreign statisticians to BuCEN, CIR learns of new data sources and forthcoming surveys in many parts of the world. (See Appendix C for a listing of staff participation at professional meetings);
- (c) CIR analyzes and publishes demographic data for regular Census Bureau publications. (See Appendix B for a listing of publications on international topics);
- (d) CIR develops new methodology for the estimation and evaluation of fertility, migration and mortality statistics in LDCs;
- (e) CIR develops, maintains, and distributes demographic software programs for evaluating census/survey data, estimating fertility, migration and mortality levels and trends, and making population projections;
- (f) CIR provides technical assistance through workshops and seminars (as in Rabat, Morocco, February 27 - March 9, 1984, and in Nairobi, Kenya, September 10-21, 1984) and by meeting requests for training, analysis, and needs assessment;
- (g) At the request of other AID contractors, CIR staff serve as resource persons in AID-funded technical assistance programs. (Examples are a two-week seminar in Bamako on the use of microcomputers in demographic analysis organized by Westinghouse Health Systems, March 26 - April 6, 1984, and a presentation on Computer Programs for Demographic Analysis [CPDA], at the Population Institute, summer, 1984 and a four-week seminar on fertility estimation using microcomputers at the East-West Population Institute, summer, 1985.); and
- (h) Last but not least, CIR staff contribute to demography through research and writing on their own time. For publications outside of BuCEN, see Appendix D.

CIR's skills in data collection (a) and (b) and data analysis (c) and (d) are described in detail in Chapter IV, and its activities in development of software programs (e) and technical assistance (f) and (g) are set forth in Chapter V. The staffs' personal contributions to demography (h) are reviewed further in Chapter III.

II.2 Proposed Activities

CIR has under consideration an expansion of its activities, some of which would be of potential benefit to AID. New initiatives in the areas of technical assistance and in preparation of software should be of particular value. (See Chapter V for additional details.) CIR is competent to fulfill these undertakings; additional staff and funding, however, are likely to be required.

III. CIR STRUCTURE, STAFF, AND BUDGET

III.1 Structure and Staff

Allocation of CIR services and output among its donors is not feasible. Although revenue sources are abundantly clear, the CIR structure and staff are not differentiated by donor. This is understandable since to a considerable extent donors to CIR look to it for similar information and capability - namely on-going monitoring, compilation, and analysis of demographic and related social and economic data for the countries of the world.

As of October 1975, the CIR staff consisted of 75 persons of whom 19 professionals work on AID projects, four with a Ph.D. and 10 with an M.A. The 32 are distributed by grade level as follows:

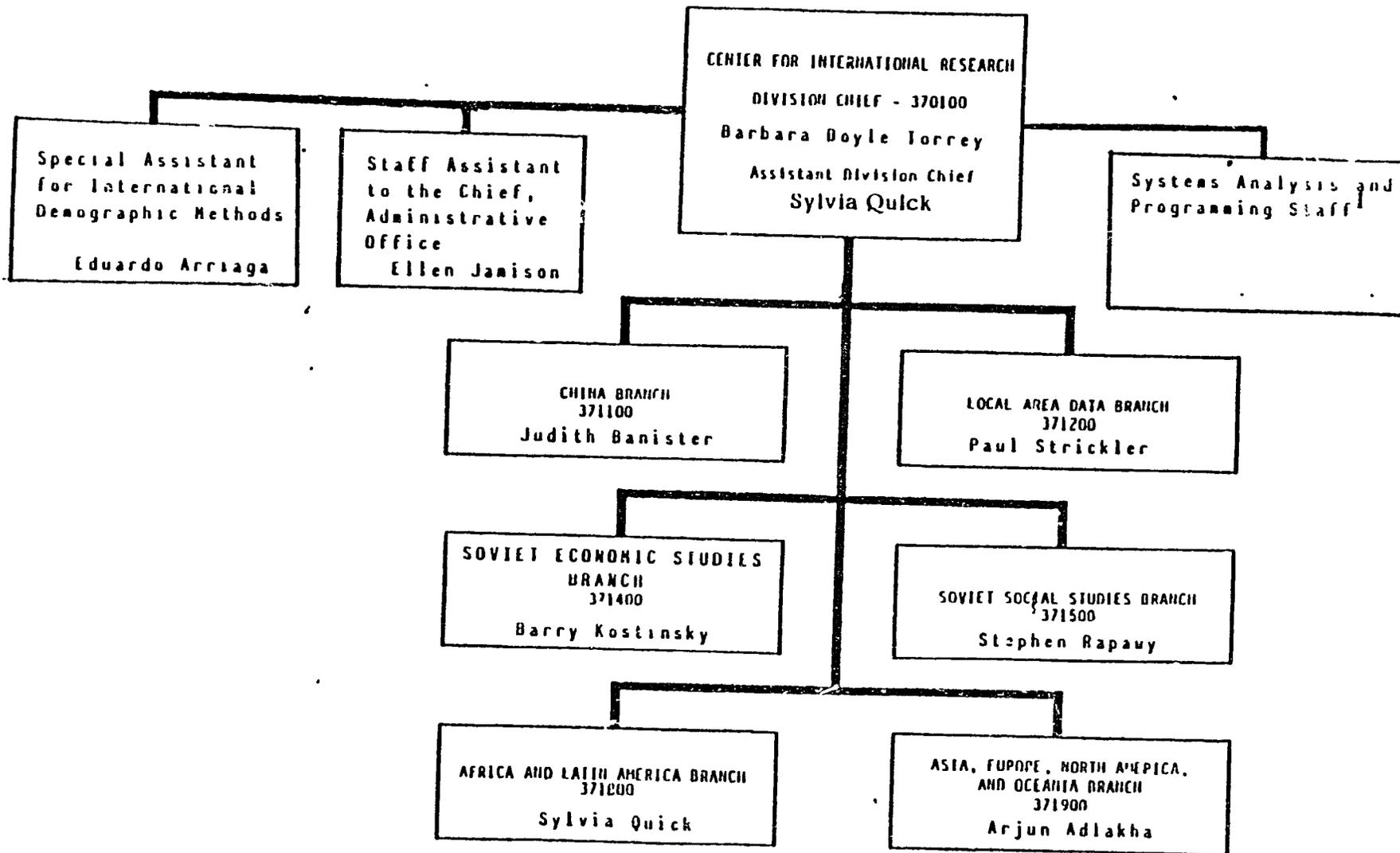
<u>Grade</u>	<u>Number</u>	<u>Grade</u>	<u>Number</u>
GM15	3	GS7	5
GM14	3	GS6	1
GS13	3	GS5	6
GS12	6	GS4	2
GS11	2	GS3	1

Compared with this staff size and composition, the staff that POP funding alone could support is small. Illustratively, POP funding could support the following mix of staff:

<u>Level</u>	<u>Number</u>
GS13	1
GS9	2
Statistical clerk	1
Secretary	1
Supply clerk	<u>1</u>
Total	5

As shown in Figure II.1, the CIR is structured into six branches and three specialized staff offices, all attached to the office of the Division Chief. Barbara B. Torrey, the present Chief, has an appropriate substantive background, and appears to possess good fine rapport with the staff, appropriate managerial

Figure II.1 Structure and Staff of U.S. Census Bureau
Center for International Research



1 No funds are presently available to provide outside services

and administrative skills, and sensitivity to donor needs. Torrey was recently appointed to this position, succeeding Samuel Baum, the long-time chief, when he became BuCEN's Senior Researcher for International Programs.¹

Continuity in CIR employment tends to be good, attributable to its civil service status as well as to staff interest in and dedication to the work. A source of dissatisfaction is the lack of time for independent research and preparation of papers to present at meetings and to publish. Staff now produce professional papers largely outside the standard office hours. The staff also feels constrained by the lack of travel funds for direct contact with their network of correspondents in the acquisition and evaluation of data. The staff argued that more direct contact would not only improve the quality, quantity, and timeliness of the data base but would yield a high dividend in training LDC personnel in demographic analysis. Granting the merit of the argument, the team raised the question that additional funding might be involved. Specific levels of funding, however, were not discussed.

III.2 Budget

In 1985, the CIR operated with a total budget of \$3.7 million of which \$340,000 or 9.2 percent represented POP support. Other donors include national defense agencies, the National Institute of Aging, the National Science Foundation and the National Institutes of Health. The team was informed that the parent BuCEN is not currently providing funds to the CIR, in spite of which CIR staff stressed its responsibility as a BuCEN agency to respond to a heavy volume of ad hoc requests from the public in addition to meeting contractual obligations to its donors.

The time series of POP support to the CIR given in Table II.1 shows a decided drop after 1980, in relative as well as in absolute terms, for its general statistical services. From a level of \$900,000 in 1978, (when POP support represented 100 percent of the total for the demographic data aspect of CIR's work), POP support declined to \$300,000 in 1981 and \$250,000 in 1982. This year (1985) POP support is at the level of \$340,000, or 19 percent of CIR's total \$1,788,200 budget.

The reasons for the huge reduction in funding in the 1980s compared with the 1970s are largely historical. Strained relations between POP and CIR in the late 1970s have been a major factor. The strain resulted partly from AID and CIR staffs' not sharing an identical view regarding the statistics CIR was generating and partly from CIR's tendency to provide responses in more detail -- and more slowly -- than suited AID. The result has been not only that AID funding has dropped but also that AID has tended to go elsewhere to meet its ad hoc data needs. (See Chapters V and VI for further details on CIR's relationship with AID.)

Although the major share of the CIR budget comes from donors other than POP, CIR views POP's input as representing an important segment of its support. There is merit in the view that the loss of POP funds would seriously undermine

1. As Chief of CIR during the RSSA review period, Baum was of course present during the team's on-site visit, although Torrey presided over the sessions.

TABLE II.1 CENTER FOR INTERNATIONAL RESEARCH FUNDING

<u>Fiscal Year</u>	<u>AID/POP</u>	<u>International Demographic Data Center (DDC)/CIR *</u>	<u>AID/POP as a Percent of IDDC</u>	<u>Total CIR Budget</u>
1978	\$900,000	\$ 900,000	100%	NA
1979	893,000	893,000	100%	NA
1980	815,000	1,033,000	79%	NA
1981	300,000	1,014,485	30%	NA
1982	250,000	1,010,000	25%	NA
1983	300,000	1,432,000	21%	\$3,127,000
1984	400,000	1,678,556	24%	\$3,643,056
1985	340,000	1,788,200	19%	\$3,702,200
1986**	10,000	1,233,630	.8%	\$3,199,130

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* IDDC was merged with Foreign Demographic Analysis Division in 1983 and the two became the CIR.
 ** Funding received to date.

CIR's ability to retain staff of sufficient technical competence to maintain the evaluated, comprehensive, computerized demographic data base. The value of that base to AID is the basis of this report's major recommendation -- That, despite the pressures on POP resources, at a minimum, POP should continue to provide CIR support for maintenance of the International Data Base (IDB).

IV. THE INTERNATIONAL DATA BASE (IDB)

IV.1 Overview

IV.1.1 Sources of Data

Since 1968, BuCEN has maintained an international data file of demographic and socio-economic variables known since 1981 as the International Data Base (IDB). CIR acquires the data from a vast network of formal and informal contacts. Direct communication with national statistical offices is a principal channel, much of this routine receipt of recent publications of census and survey findings.

Less routine and more informal channels are growing in importance, however; unpublished and prepublication materials are routinely sought and procured, partly through formal channels (e.g., papers presented at Population Association of America meetings, masters or doctoral theses cited in Population Index), in which CIR enjoys no particular comparative advantage, and partly from CIR's vast informal network of international contacts built up over several decades.

CIR's informal contacts include direct correspondence with foreign statistical offices for as-yet-unpublished data; on-going liaison with U.S. embassy and AID personnel; field visits by CIR or other BuCEN staff to LDCs with emerging interest in demographic issues and visits by foreign statisticians to BuCEN; and maintenance of contact with participants in workshops organized by CIR and ISPC to encourage receipt of unsolicited materials. Further and very essential sources of data for the IDB are the international agencies, which also provide input through a mix of formal (publications) and informal (correspondence, meetings) channels.

An examination of the 1983 World Population Report, CIR's major publication, reveals that it has indeed drawn heavily on country-specific materials not contained in formal publications of national statistical offices. Comparison of the IDB data with figures in reports of other agencies, such as the UN Population Division or the World Bank, confirms that CIR's efforts to scavenge widely for data, to assess the acquired data and, where called for, to adjust the data or generate new estimates, ultimately yield a data base with contents that sometimes differ significantly from other compilations.

Despite the richness of its sources, however, CIR staff stressed the need for additional opportunities to accumulate yet more data, particularly through workshops, seminars and conferences. Their position was that these contacts would enable them not only better to corroborate available data but also to collect information in areas not yet fully explored.

Recommendation

CIR should be encouraged to continue to enrich its network of formal and informal sources of information.

IV.1.2 Tables

The IDB is designed as a set of 94 tables for each of 203 countries or political entities, yielding a maximum of 19,082 (94 x 203) tables. Since demographic data are often scarce for many LDCs, particularly in Africa, the present number of tables is only about one-third of the maximum and many tables have empty cells. The coverage, by topic or country, is heavily influenced by the past history of other CIR data compilation activities. Preparation of the Women in Development (WID) volumes greatly enhanced the amount of social and economic data by gender contained in the IDB, while country studies for other sponsoring agencies often result in acquisition or estimation of difficult-to-obtain statistics.

The IDB represents an imposing and impressive collection of statistical information. By subject matter, 56 of the tables are on demographic topics (population size and growth, fertility, family planning, mortality, migration, marital status, household size and composition, ethnicity), and the remainder present data for economic variables (18), literacy and schooling (9), health-related topics (7), and housing (4). Most national statistics are disaggregated into urban, and rural populations. With few exceptions, the tables are multi-dimensional, age and/or sex being standard classificatory variables. Some tables contain historical-time series, while others contain the most recent data only. (It was not possible to determine the proportion with more than one date.) All tables are accompanied by notes identifying sources of data, methods of adjustment of estimation employed, and so on.

Recommendation

It would be useful if national statistics could be further disaggregated, to include where possible geographic break-downs and socio-economic categories.

IV.1.3 Computerized File

Since 1981, the IDB has been fully computerized. All the tables are contained in one computer file, from which any subset of tables can be dumped to a screen, hard copy, or magnetic tape by using simple software written by the CIR staff. The software also permits the listing of a portion of a table (e.g. one figure) from an IDB table. Software to construct summary tables through extraction of figures from more than one IDB table, however, are as yet not well developed. Thus at present cross-national tables (e.g., the crude birth rate for sub-Saharan African countries) or cross topic tables (e.g., selected demographic and economic indicators for Nigeria) must be constructed by the user after dumping all relevant country tables.

The IDB does not contain all of the data acquired by the CIR. "Country files" are maintained with data which either have been displaced from the IDB alternative data or by CIR estimates, or data not within the 94 specified tables. The country files for countries that have been the subject of detailed CIR country studies are particularly likely to include a large amount of non-IDB data. Thus the IDB, despite its size, is only a partial representation of CIR's data holdings.

IV.1.4 Future Maintenance

The extent to which the IDB will be maintained in the future is currently a topic of active discussion at the CIR. Due to cutbacks in funding, the systems programmer, the staff member chiefly responsible for the computerization of the IDB, has had to leave the CIR, and there are no present plans to replace him. As a consequence, evolution in the IDB structure and development of software to take maximum advantage of the increasingly complex data base have come to a halt. Of particular concern is loss in the momentum of the development of software to construct cross-tabulations of data from more than one IDB table.

CIR staff has indicated a commitment to maintain the IDB in its present form, with selective updating in relation to other CIR projects, such as the Congressional presentation, the World Population Report, and special studies (e.g., the upcoming project on the aged). According to this scenario, with presently available resources, it will not be possible to improve accessibility of the IDB to a broader clientele, and some slippage in its completeness is likely.

Recommendation

It would clearly be in the interests of AID if the work on software were to resume, to permit easier extraction of (a) selected statistics for specified countries and (b) tables cross-classified by selected variables.

IV.2 Assessment of the IDR

The impressive procedures used by CIR to acquire data for the IDB have been reviewed in Section IV.1.1. This section assesses three other aspects of the IDB: the scope of its contents; the procedures for data assessment and derivation of preferred estimates; and, of most importance, the contribution of the IDB as compared with other sources of demographic information.

IV.2.1 Contents of the IDR

As currently structured, the IDB is an attractive combination of demographic and related socio-economic data. It thus serves well as a resource for the population field.

A major shortcoming, however, is the lack of extensive data on family planning. Five IDB tables on number of acceptors (Tables 52-54) and contraceptive prevalence (Tables 55 and 56) do not include much of the extant data. For example, Tables 55 and 56 are empty for many countries that carried out contraceptive prevalence surveys (CPS) and/or World Fertility Surveys (WFS). For some countries the IDB contains only a subset of the relevant and available service or survey statistics.

Concern has been expressed over CIR's failure to date to utilize the extensive data now available from the contraceptive prevalence and fertility surveys. Skepticism of findings may have been warranted in the past (this question was raised in the 1979 evaluation), but in recent years the questionnaires, procedures, and over-all expertise have greatly improved. Moreover, millions of dollars have been expended in LDCs to increase contraceptive prevalence and to reduce fertility. Monitoring levels and trends in contraceptive prevalence is

thus a major interest of AID. The numerous surveys of the past decade, as well as family planning program service statistics, have produced a rich, valuable resource waiting to be tapped.

The UN Population Division and the Population Council have thus far made the major efforts to assemble and publish these data. CIR is, however, well positioned to work independently, especially on the prevalence (and fertility) information. The major problem has been lack of funds. Due to the variation in population bases, geographic coverage, definition of "user" of contraception, etc., the inclusion of these data in standard tables is more than simply a matter of data input.

Because fertility and family planning are of major interest, there is a need for systematic and regular efforts to compile and examine recent estimates and to adjust them to standard definitions for comparative analysis. For example, studies on the extent to which a change in the socio-economic composition of a population may account for an observed rise in contraceptive prevalence have been inadequately addressed, largely because of the paucity of data. Methods applied to the numerator of the rate, and the composition of the population in the denominator, also bear scrutiny, as do techniques for measuring the so-called unmet need or market for contraceptive services.

Of particular value to AID would be estimates of trends (in fertility and family planning). For example, it means more for judging the AID contribution to know that prevalence in Thailand has risen very rapidly in the last decade than to know simply that it was high in the last survey. It is also important to know whether a current modest level in a mediocre program was achieved recently or has remained static over an extended time period. A further reason for stressing trends is that compilations by leading survey groups tend to be agency specific: WFS assembled WFS cross-country findings; Westinghouse and the Centers for Disease Control (CDC) have generally assembled only their own results. The Population Council's Family Planning Fact Book is a source of data on time trends, but since the annual data are based largely on service statistics, they tend to be limited to prevalence supported through the public sector.

The CIR seemed receptive to fulfilling the need to procure and maintain reliable estimates of contraceptive prevalence over time, disaggregated by method, age groups, and public/private sector sources of supply. Such a data base would be a rich resource for evaluating AID support.

Although for trends reviews, the data evaluation requirements are especially demanding, CIR, with its demographic expertise and experience plus its independence from the agencies that generate the primary data (see IV.2.3), is well placed to take on these tasks. In the past, several senior staff have given personal attention to issues of contraceptive prevalence, many of CIR's data sets include it and the present network of country correspondents includes many knowledgeable informants on it. Furthermore, currently CIR has on staff two or three people competent to procure and evaluate service statistics from organized family planning programs and CIR would welcome the opportunity to undertake these tasks. Nonetheless, to make all the data comparable would probably take a new full-time person.

Recommendations

Three steps are recommended as part of a strategy that would make IDB a source of valuable data on family planning.

- (1) Giving higher priority to completion of the fertility and family planning tables in the IDB;
- (2) Addition of tables to the IDB; and
- (3) To execute (1) and (2), allocation of more staff time to this topic area.

In detail, the recommendations would involve the following:

(1) Giving higher priority to completion of the five IDB tables on numbers of acceptors and contraceptive prevalence, specifically by incorporating the rich amount of data currently available. Development of the data base would involve assembly and critical examination of prevalence information, by contraceptive methods, for LDCs, chiefly from surveys (although censuses in Indonesia and Thailand have also included this). Service statistics systems yield prevalence estimates for public sector support in several countries.

If CIR pursues this activity, it should procure the trend record over the past decade or two rather than limit itself to current and prospective developments.

(2) Adding tables to the IDB. In particular, the present tables on prevalence (Tables 55 and 56) appear to use all women as a base. A denominator of currently married women would be preferable, since these are the women for whom contraceptive practice is relevant. Additional tables on source of supply of current methods (public versus private sources) and prevalence among different socio-economic groups might also be considered, as well as tables on duration of breastfeeding. A rich literature on the proximate determinants of fertility and unmet need for contraception provides insight into data requirements for sound policy decisions.

(3) Allocating more staff time to this topic area would be essential to carry out steps (1) and (2). Although CIR presently has staff skills to undertake this expansion of the IDB, it would strengthen its skill by the addition of another staff member experienced in family planning data.

IV.2.2 Data Assessment and Estimation Procedures

Since the CIR, by and large, utilizes well-accepted data adjustment techniques developed elsewhere, the team did not consider it necessary to examine CIR's work in this area intensively. The few techniques developed by CIR staff (e.g. Arriaga's method for estimating age-specific fertility rates and methods for estimating a model life table) are generally accorded high marks by those familiar with it. This is not to say that there have been no serious disputes in the past about CIR estimates. Such disputes are inevitable where information is limited or contradictory, and policy concerns are intense. To illustrate the level of consensus about demographic estimates, the CIR staff prepared tables comparing CIR estimates of population size and growth rates over the period 1980 - 2000 with estimates of the UN and the World Bank. Not surprisingly there is vari-

ation -- discrepancies of two percent or more are common -- but there is no obvious pattern to the discrepancies, which suggests no consistent bias on the part of any agency. (See Appendix E for this comparison.)

An informal comparison of data evaluation and adjustment procedures pursued at the UN and the World Bank suggests that CIR estimates are probably scrutinized more thoroughly. An important feature of CIR estimates, not shared by World Bank or UN estimates, is the detailed annotation of sources and estimation methods underlying each figure. This information enables users of IDB data to make their own assessment of controversial or questionable figures.

IV.2.3 Other Data Bases

In view of the compilation and publication of international demographic data by several authoritative agencies with first hand access to primary sources, a major issue is the possible redundancy of effort and waste of resources. The amount of redundancy, however, is substantially less than might at first appear. While the UN Statistical Office prepares estimates, it is constrained by its nature as a political, international organization, and it is obliged to publish official census and vital statistics regardless of the quality of the data (though it does use quality codes to aid the reader). The Population Council procures family planning program operational statistics from primary sources but does not generate basic population statistics (population size and composition, vital rates). The World Bank does generate such estimates, but with its limited staff and experience in this matter, the Bank does not supplant the CIR or UN Population Division estimates. The PRB draws on other agencies, especially CIR, for the figures in its annual Fact Sheet. Westinghouse not only relies on the data compilation efforts of other agencies but leans heavily toward CIR estimates. In short, there are two independent, prime sources for the international demographic statistics required by AID: CIR and the UN Population Division. For family planning program data, the Population Council's Family Planning Fact Book (12 editions to date), has thus far been the unique, authoritative reference.

On the question of whether duplication of effort is healthy or wasteful, there was widespread agreement that AID and the broader community are well served by having both the UN and the CIR operations. Each is self-sufficient. The frequent (almost daily) communication between the two staffs, however, is mutually reinforcing and conducive to the production of a better data set by each, and compatibility and mutual respect characterize the relationship between the two organizations. A cogent argument in favor of maintaining the IDB, despite any redundancy with UN efforts, is the timeliness of estimates in the IDB. Sole reliance on the UN for recent estimates would mean reliance on projections rather than on recent survey or census findings. It is recommended, therefore, that CIR efforts to compile, evaluate and adjust basic demographic estimates be continued as beneficial to all parties concerned.

V. DISSEMINATION AND UTILIZATION

V.1 Overview

No matter what its inherent value, the usefulness of the data collected by CIR is a function of its utilization by outside parties and institutions. In this regard, CIR has enjoyed mixed success. The information accumulated is disseminated in a number of ways: through publications, conference presentations, software transfers, technical assistance, and routine transmission of the IDB tables to AID, PRB, and Westinghouse Health Systems. Furthermore, the information in the IDB is available to be shared upon request among a wide variety of consumers, most particularly other demographers. While CIR has gained widespread respect throughout the demographic community for its IDB tables and its ability to provide detailed responses to ad hoc inquiries, the usefulness of its publications has been less satisfactory.

V.2 Dissemination

V.2.1 Publications

Publications have been the weakest aspect of CIR's work. Three problems stand out. There is a relatively low ratio of actual to potential information culled from its files and the IDB. The design, graphics, format, cover, in short the packaging, of its output, leaves much to be desired. Timeliness is also a problem, with publication on an irregular basis and with often a substantial time lag between the data itself and the date of publication.

CIR's most important publication, the World Population Report volume, has a circulation of some 5,000 copies. In addition, some 28 Country Demographic Profiles were published between 1977 and 1982, since which time this publication has been suspended. Most recently, the five Women in Development (WID) regional volumes appeared, very attractively published under a contract between the WID office of AID and the CIR. Finally, staff have published widely in professional journals and have presented papers at numerous conferences. Additional dissemination activities appear in Appendix B, "Publications on International Topics."

The World Population Report is a prime example of the problems cited above. The almost universal reservations expressed concerning it are well justified. Its extensive and careful technical base is not apparent, robbing it of much of the authority it might otherwise carry. The variables included are too few, and cover too narrow a range. Its format, of two pages per country, seems on balance much less useful than giving each topic its own table with a listing of all countries, as in the standard UN and World Bank publications. In its present form, it repeats the name of all variables on every page, and is cumbersome large for its content. Timeliness is also a problem; there is a distinct time lag between the original data gathering and ultimate publication in the Report.

The WID "Women of the World" chartbook, on the other hand, represents a far more successful approach to communication than does the World Publication Report. Art work is appealing, major points are concisely and clearly presented, and tables and other substantiating data are included but not emphasized.

Recommendation

CIR needs to rethink its entire approach to its publications. Specifically, it should withhold further funding of the 1985 World Population Report, and rechannel funds into more attractive alternatives. In planning for these alternatives, it should make every effort to produce well-packaged, up-to-date products that do justice to the rich data in the IDB. Specifically:

1. The 1985 World Population Report should be supplanted.

CIR has nearly completed its summary figures as of the 1984 cutoff date. Since these can be published at little expense, the report should go forward. However, the projected 1985 World Population volume should not be published, even though some of the typing has been finished. Substantial preparation and printing funds would be saved by cancelling it, which could go toward alternatives that could thereby appear earlier.

2. New Standards for Publications should be developed that would address the major problems described above. Main considerations should be:

- Style
 - . Efforts should be made to tailor the product to its intended audience.
 - . Publications should be packaged more attractively.
- Content
 - . More information from the IDB should be disseminated.
- Timeliness
 - . The time gap should be narrowed between manuscript preparation and publication.

Thanks to current technology, which permits a much faster transit from data compilation to publication than heretofore, improved timeliness may now be possible. The computerization of information in table format, together with high quality printers, permits the in-office production of camera-ready copy. Art work can also be produced by computer; CIR has already used an Apple program to create pie charts for the WID books. Such graphics, too, can be produced on a camera-ready basis. Finally, CIR can sub-contract printing to an outside firm (as with WID), a procedure consistent with directives urging greater federal use of the private sector. (All these possibilities were discussed with CIR staff.) In combination, these various developments would permit CIR to establish an impressive reputation for rapid and appealing as well as authoritative publications.

In view of the above, CIR should

- . minimize cost and time expenditures by producing camera-ready copy; and
- . consider contracting some printing to the private sector.

V.2.2 Software

CIR has been a major supplier of demographic analysis software since publication of its manual Computer Programs for Demographic Analysis (CDPA) in 1976. Because of lack of funding, it has not published other new programs it has developed since 1976. It has, however, continued to invent and adapt programs to derive improved demographic figures. The provision of modern computer software (and hardware) to LDCs has been urged by many of the best informed members of the profession. It would represent a useful service, one which the CIR group is well prepared to offer, and one which would be consistent with AID's objectives as expressed in its support of the Westinghouse group for activity of the same type.

An important in-house proposal at CIR is to prepare computer software programs of the latest demographic techniques of analysis that can be run on both mainframe and microcomputers. This proposal contains a number of excellent ideas, including publishing a new manual and conducting regional training seminars in use of new techniques. Westinghouse, which recently lost its microcomputer expert, will presumably be recruiting a replacement, and so joint planning may now be especially timely. CIR has well-qualified personnel in this specialty. A joint effort, therefore, should prove superior to either group's working alone, especially since Westinghouse is involved on the hardware side and can help to ensure compatibility with the best micros.

Recommendation

CIR should be provided support for its proposal to resume preparation and dissemination to LDCs of new demographic analysis software programs, suitable for both mainframe and microcomputers.

Given the ready availability of software packages, the additional work to give them to the field at large in readily usable form seems modest. Cost calculations of the various parts of CIR's proposal are needed to shape the final plan, and a small advisory group might profitably be used to choose from available programs those most suited for final development and dissemination, as well as to advise on new ones, including programs for contraceptive prevalence analysis.

V.2.3 Technical Assistance

Examples of workshops and seminars in which CIR was able to provide technical assistance in demographic techniques were provided in Chapter II (see points [f] and [g]). These activities have proved highly beneficial for CIR staff, both as contributors to and recipients of the proceedings. This observation also applies to other kinds of assistance to developing countries involving interaction with their personnel. Direct contacts improve realism and enrich the network's ability to collect data and provide for feedback of results and new methods.

Historically, however, compared with the ISPC, CIR's activities in this realm have been modest. The ISPC has been actively engaged for many years in training LDC nationals to prepare for and conduct censuses and demographic surveys. There has, however, been far too little technical assistance provided for the next step, the analysis of the data. The CIR is a natural unit to help fill the void; it could pick up where ISPC leaves off by training LDC nationals, through seminars and workshops, to analyze census and survey findings, to apply demographic estimation techniques, and to prepare written reports.

The demand for projects to transfer demographic technology to LDC nationals is growing. Requests for these intensive demographic applications (INDA) have been received from countries worldwide: The Sri Lanka Department of Census and Statistics, for example, recently requested joint preparation of district level population projections, by ethnic group; Mexico has requested collaboration on its simulation models for population projections under several policy alternatives; and Pakistan has asked for assistance to analyze a national migration survey. In response to these various requests, CIR has drafted a proposal for expanded technical assistance activities.

Recommendation

AID should support CIR's proposal to provide expanded technical assistance in demographic analysis. Especially if it moves into the prevalence area, CIR will require additional country contacts. Training could take place through special seminars and workshops. In particular CIR could take advantage of contacts with ISPC trainees coming to Washington, and set up parallel workshops for them, after their ISPC training. The existing proposal represents a good basis for discussion between CIR and AID. A contracted arrangement is suggested as a useful mechanism.

V.2.4 Annual Series

CIR publishes estimates of vital rates and other estimates which it routinely supplies to AID, the UN Population Division, the World Bank, PRB, and Westinghouse. Production of these data is a basic staff discipline that establishes a store of information from which much else is derived. It keeps the IDB up-to-date for all users and donors. It is basic to the annual Congressional Presentations, and gives AID an evaluated set of annual figures that appear to deserve at least as much consideration as those of the UN or World Bank (Section IV.2.3). It also basic to the ad hoc exchanges with the UN Population Division, the World Bank, and the data consumers described in V.3 below.

Recommendation

Work to produce these yearly estimates should continue.

V.3 Utilization

V.3.1 Direct Access to IDB

In the past, the IDB has been at the disposal of persons and institutions outside CIR through four mechanisms: on-line access, diskette copies, hard copies of selected tables, and copies of tapes.

The on-line IDB facility permitted outsiders to make direct computer connections with IDB, and they could utilize the software referred to in Section IV.1.3 to dump tables or portions of tables as desired. This facility seemed well-balanced and simple to use. The funding cutbacks that required elimination of the systems programmer position (see Section IV.1.4) also resulted in termination of on-line access and diskette copies. CIR quarterly reports and interviews with CIR staff, however, revealed that although great enthusiasm was expressed for the on-line facility by many parties, in fact the level of use was modest

while the facility was available, and there was no evidence of an imminent substantial upswing in demand. Furthermore, more aggressive publicity for enhanced flexibility of this facility would probably not increase the relatively small demand for it.

V.3.2 Ad hoc Requests

CIR quarterly reports to AID indicate a relatively large number of ad hoc requests for information from individuals or agencies, ordinarily ranging between 200 and 400 per quarter. In 10 quarterly reports covering the period from the first quarter of calendar year 1983 through the third quarter of calendar year 1985, with the first quarter of 1985 missing, 2627 requests were reported, a mean of 263 per quarter. Twenty-nine percent of the requests came from research organizations, universities, and public agencies; 28 percent from various federal agencies; 18 percent from private businesses; 9 percent from private individuals; 8 percent from the media; and 8 percent from international organizations. Only a few of those were from AID, which tends to go elsewhere (to Westinghouse, for example), overlooking in the process that much of the data it receives come originally from CIR's data base.

While substantial, this number of requests could easily be larger if the service were publicized. There are funding limitations, however. It is ironic, however understandable, that CIR services the public's ad hoc requests, for which it receives no direct funding, yet is largely ignored in this respect by POP. CIR's sense of obligation to the public is commendable. As part of a government bureau funded by taxpayer money, the CIR is obligated to meet the public's need for information. In like manner, however, it is time that the POP and CIR develop a more active liaison -- that POP on its part more fully appreciate the value of CIR's professionalism and assessed data base, and that CIR on its part more fully understand that responses to POP ad hoc requests require a sensible trade-off between timeliness and precision of response.

While not eager to add appreciably to its work load, CIR staff would welcome more frequent, direct communication with POP and USAID mission staff. CIR is now more sensitive that it was several years ago to POP's need for rapid response, even at the expense of getting rounded estimates instead of more refined, precise data. Moreover, the present availability of more sophisticated computer technology, faster data retrieval in camera-ready copy, software packages of indirect demographic estimation techniques to deal with low quality data, and so on, are all conducive to rapid and timely response.

Recommendations

With new leadership at CIR and POP, the time is auspicious for the two agencies to reconsider their relationship. There should be more frequent contact; POP should direct to CIR certain types of ad hoc requests -- e.g. those requiring demographic expertise to prepare the information, or awareness of the hazards of comparative analysis. To do policy-relevant research, CIR needs frequent, direct communication with AID/Washington and field staff; the benefit to AID would be prompt response to ad hoc needs requiring demographic knowledge and expertise.

CIR should be more sensitive to variation in the degree of precision different clients require. A significantly larger flow of ad hoc requests, however,

would not represent the best use of CIR resources. An efficient allocation of resources would be to rely on Westinghouse or the Population Reference Bureau for less complicated requests.

VI. LIAISON WITH DONORS AND OTHER DATA-PRODUCING ORGANIZATIONS

VI.1 AID/CIR

The relationship between POP and CIR has been alluded to earlier in the report, but it may be useful to summarize the situation here:

(1) For FY 1985, AID/POP funds accounted for 19 percent of the CIR budget for the IDB, and 9.2 percent of the total CIR budget. While these proportions are not overwhelming, CIR considers POP support critical for maintenance of its evaluated data base (Section III.2).

(2) POP receives the CIR's annual series prepared for the annual Congressional presentations but tends to go elsewhere for specific information requests, seemingly unaware that CIR is the prime source of information supplied (Section V.3.2).

(3) Since direct liaison between the two agencies is infrequent, their potential mutual support is not fully recognized (Section V.3.2).

(4) At this point, CIR would welcome more frequent direct contact with POP, and is better able to respond in a timely fashion to AID's requests, particularly for in-depth information (Section V.3.2).

Compliance with the recommendations in Section V.3.2 would do much to revitalize the relationship between AID and CIR, a step that would clearly be in AID's interest.

VI.2 CIR and Other Donors

It appears that the relationship between CIR and its other donors is good. Funding from other sources will probably continue as heretofore, but any loss of POP funding would require a shifting of priorities that could affect the quality and quantity of information in the data base, and therefore the resources of PRB, Westinghouse, and other agencies.

VI.3 CIR and Data-Producing Organizations

A most cooperative relationship appears to exist among the three major data-producing organizations: the CIR, the UN Population Division, and the World Bank. Westinghouse and the PRB personnel also seem to be in constant contact with CIR; they share information, discuss and try to resolve, or at least understand, differences in estimates, and seem to appreciate the constraints and pressures on each other. The CIR is regarded as a valuable resource in all aspects -- quality of work, staff expertise and dedication, and productivity. The only question was whether the Bank should further stress its own demographic estimates and projections, given that it is part of the UN family and that the Bank does not deal primarily with demographers.

VII. RECOMMENDATIONS

VII.1 Level of POP Support to CIR

Since fiscal year 1981, the Office of Population has provided approximately \$300,000 annually to the CIR. The evaluation team considered five alternatives for future AID support of CIR:

- (1) Termination in FY 1986;
- (2) Termination within two or three years;
- (3) Continued funding at the recent level (i.e., \$300,000 per annum);
- (4) Continued funding with a modest absolute increase; and
- (5) Continued funding with a substantial increase.

Either alternative 3 or 4 is recommended, (the choice depending upon POP resources), contingent upon specific changes in CIR noted in this report and reiterated below. Neither alternatives (1) nor (2) seem appropriate, given the important service to AID and the wider demographic community of CIR's maintenance of an international data bank, whether utilized directly or indirectly (through Westinghouse and the PRB, for example). Option (5) is also not justified from the standpoint of direct dividends for AID. Option (4) may not be feasible under current AID funding constraints, but if more funds were to become available, CIR could productively utilize an increased level of funding. Indeed, a modest increase in funding might well yield a disproportionate return by permitting CIR to pursue more rapidly the new activities recommended below.

VII.2 The International Data Base (IDB)

A primary reason for recommending continued AID support for CIR is to ensure maintenance of the evaluated IDB. To enhance its relevance to AID, however, it could be further enriched through the following steps.

- Expansion of the IDB contents to make it a reliable and comprehensive source of information for levels and trends in family planning practice and fertility (see Section IV.2.1).
- More detailed disaggregation of national statistics (beyond the present urban-rural breakdown), geographically as well as by population subgroups (age, sex, and socio-economic categories) (see Section IV.1.2).
- Continued enrichment of the network of formal and informal sources of information (see Section IV.1.1).
- Further development of the IDB structure and related computer software for easier extraction of (a) selected statistics for specified countries and (b) tables cross-classified by selected variables (see Section IV.1.3).

To implement these activities, the computer specialist who recently left CIR should be replaced (see Section IV.1.4).

VII.3 Publications

Publications have been a weak aspect of CIR's work. The situation could be improved through the following steps (see Section V.2.1 for details).

- Funding of the 1985 World Population Report should be rechanneled into more attractive alternatives.

- These might include regular publication, perhaps biennially, of analytical useful, topical tables (with countries listed).

- In the interests of consumer appeal, CIR should consider

- . tailoring the product to its intended audience; and

- . packaging publications more effectively, in the style of the WID booklets, for example.

- In the interests of improving the content, CIR should consider

- . disseminating more material from the rich data in the IDB.

- In the interests of timeliness, cost and consumer appeal, the CIR should consider

- . narrowing the gap between the publication date and recency of the data;

- . minimizing cost and time expenditures by producing camera-ready copy in-house; and

- . contracting some work to the private sector.

This is not to suggest expensive and colorful publications with fancy art work. However, materials produced should have the regularity, format, style, design, charts, and substantive potential that could attract and maintain the audience the IDB merits.

VII.4 Software Dissemination

AID should seriously consider CIR's proposal to develop new demographic software for LDCs (see Section V.2.2). Dissemination might be independently by CIR or collaboratively with Westinghouse.

VII.5 Technical Assistance

AID should seriously consider CIR's proposal to provide expanded technical assistance in demographic analysis to LDCs (see Section V.2.3).

VII.6 Annual Series

Work to produce the yearly estimates from the IDB should continue (see Section V.2.4).

VII.7 Ad Hoc Requests

- AID should begin to direct to CIR requests for demographic information that require in-depth responses.

- CIR should tailor its responses to the needs of its clients.

- Less complex requests for information could be channeled to Westinghouse or the PRB (see Section V.3.2)

Appendix A SPECIFIC QUESTIONS IN THE SCOPE OF THE TEAM'S ASSIGNMENT

A.1 Demographic Data Bases. In developing and maintaining a demographic data base, CIR evaluates the data and adjusts it where necessary. In FY85, CIR is entering or updating data on historical population trends, birth and death rates and infant mortality rates for all countries. Among the questions which the evaluation team should address are:

- How well has CIR performed this task? Are the data timely and reliable, particularly vis-a-vis other sources of demographic information (e.g. the UN)? Are the most recent available data (e.g. from national surveys) included where appropriate? Are CIR procedures for evaluating and adjusting data appropriate?
- How unique are the demographic data bases maintained by CIR (i.e. do they contain information not readily available elsewhere)? If AID were to continue supporting this task, how can duplication with other data bases be minimized? What role can CIR play vis-a-vis Westinghouse in maintaining demographic data bases and responding to ad hoc requests?
- How often are the data bases used outside of CIR, by whom, and for what purpose?
- Do the data reside in a medium and a format that are easily available and understandable by individuals outside of CIR? How can the content, format and accessing procedures be improved to make the data bases more useful?

A.2 Dissemination of Demographic Information. Through partial AID support, CIR disseminates demographic information via the World Population Report. Approximately 5,000 copies of the report are published and distributed to AID/W, USAID and LDC organizations. With respect to dissemination, the team is asked to address the following questions:

A.2

- What efforts have CIR and AID made to publicize and use the data base, beyond the World Population Report?
- Who uses the biannual World Population Report and how valuable it is? Is it duplicative of other data sheets or published reports? Should AID continue to support this publication? If so, what should be done to improve the content, format and dissemination of the Report?

A.3 Ad Hoc Requests for Technical Assistance. Under the current agreement, CIR can provide assistance to LDC institutions in compiling and analyzing demographic data.

- How well has CIR performed on the few occasions where the staff has provided technical assistance to LDC institutions? What efforts has CIR staff made to promote its expertise in this area? Is there a role for CIR in this area which is not being met by other Policy Division cooperating agencies? If so, how can this capability be better promoted?

A.4 Management/Staffing: The evaluation team is asked to examine the following management issues:

- What portion of CIR staff time is charged to the AID agreement, and for what activities? Is there a good match between the number and type of CIR staff supported and the workscope?
- Are there untapped staff and institutional capabilities that could be of benefit to AID/W, AID missions and LDC institutions?
- What should be done by AID and CIR management to improve contact and collaboration with other population policy projects? What can be done to increase CIR's visibility (and relevance) within AID?

A.3

A.5 Future Directions: The POP is beginning to design a follow-on project to the Demographic Data for Development Project. Any future POP support to CIR (and ISPC) will come through this new project. Therefore, we are looking to the evaluation team for guidance on what roles CIR can play within the Policy Division's portfolio.

- Given the existence of other demographic data bases and cooperating agencies who are providing assistance to LDC institutions is there an ongoing role for CIR? If so, how can the workscope be modified to improve the match between CIR's skills and experiences and AID's population program needs?

- How can CIR's activities be better integrated into the Policy Division's portfolio, while minimizing the overlap between its responsibilities and those of other policy projects?

APPENDIX BPUBLICATIONS ON INTERNATIONAL TOPICS

Center for International Research
 U.S. Bureau of the Census
 Washington, D.C. 20233

World Population Reports (Series ISP-WP)

- ISP-WP-83 World Population 1983--Recent Demographic Estimates for
 the Countries and Regions of the World [December 1983]
- ISP-WP-84 World Population: 1984--Recent Demographic Estimates for
 Countries and Regions of the World [November 1984]

[The above reports supersede earlier versions for 1981, 1979, 1977, 1975,
 and 1973.]

International Population Reports (Series P-95)

- No. 74 - Rising Infant Mortality in the U.S.S.R. in the 1970's
 [September 1980]
- No. 75 - A Comparison of U.S. and U.S.S.R. Employment in Industry: 1975
 [August 1981]
- No. 76 - Statistics on R&D Employment in the U.S.S.R. [June 1981]
- No. 77 - Vietnam's Population [forthcoming]
- No. 78 - Soviet Language Policy and Education in the Southern Tier:
 1959 to 1982 [forthcoming]
- No. 79 - Non-Russians in the Soviet Military: A Survey [forthcoming]

World Maps

- World Fertility Pattern 1978 [December 1980]
 World Mortality Pattern 1978 [December 1980]
 World Population Growth Pattern 1978 [December 1980]
 Countries of the World--Year of Latest Population Census [December 1978]

[The above maps supersede earlier versions on the same topics.]

Country Demographic Profiles (Series ISP-DP)

- | | |
|--|--|
| No. 4 - Costa Rica [August 1977] | No. 17 - Republic of Korea [June 1978] |
| No. 5 - Ghana [September 1977] | No. 18 - Indonesia [May 1979] |
| No. 6 - Guatemala [October 1977] | No. 19 - Brazil [January 1981] |
| No. 7 - Panama [November 1977] | No. 20 - Colombia [October 1979] |
| No. 8 - Sri Lanka [November 1977] | No. 21 - Nepal [November 1979] |
| No. 9 - Jamaica [November 1977] | No. 22 - Malaysia [November 1979] |
| No. 10 - Honduras [December 1977] | No. 23 - Morocco [July 1980] |
| No. 11 - Kenya [January 1978] | No. 24 - Pakistan [March 1980] |
| No. 12 - Republic of China [February 1978] | No. 25 - Turkey [August 1980] |
| No. 13 - Chile [February 1978] | No. 26 - Bangladesh [December 1982] |
| No. 14 - Mexico [September 1979] | No. 27 - Botswana [June 1981] |
| No. 15 - Thailand [April 1978] | No. 28 - Liberia [March 1982] |
| No. 16 - India [November 1978] | |

[Reports Nos. 1 and 2, published in 1973, represent earlier versions of profiles for Costa Rica and Ghana. Report No. 3 was an earlier version for the Republic of China, published in 1974.]

Foreign Economic Reports (Series FER)

- No. 14 - The Planning of Research, Development, and Innovation in the USSR [July 1978]
- No. 15 - Agricultural Subsidies in the Soviet Union [December 1978]
- No. 16 - The Structure and Functions of the USSR State Committee for Science and Technology [November 1979]
- No. 17 - The Regional Distribution of Fixed Capital in the U.S.S.R. [March 1981]
- No. 18 - Input-Output Structure of the Soviet Economy: 1972 [April 1983]
- No. 19 - The Reconstructed 1972 Input-Output Tables for Eight Soviet Republics [December 1982]
- No. 20 - The Domestic Value of Soviet Foreign Trade: Exports and Imports in the 1972 Input-Output Table [October 1982]
- No. 21 - Integration of Science and Technology in CEMA [December 1983]
- No. 22 - Financing of Research, Development, and Innovation in the U.S.S.R. [forthcoming]
- No. 23 - Employment and Unemployment in China: [September 1985]
- No. 24 - Input-Output Tables for the People's Republic of China, 1956 and 1980 [forthcoming]

Women in Development (Series WID)

Illustrative Statistics on Women in Selected Developing Countries
[Issued June 1980; Revised September 1980]

- WID-1 Women of the World--Latin America and the Caribbean [May 1984]
- WID-2 Women of the World--Sub-Saharan Africa [August 1984]
- WID-3 Women of the World--Near East and North Africa [forthcoming in April 1985]
- WID-4 Women of the World--Asia and the Pacific [forthcoming in April 1985]
- WID-5 Women of the World--A Chartbook for Developing Regions [forthcoming in May 1985]

International Research Documents (Series ISP-RD)

- No. 1 - Population and Economic Planning--A Macro-Analysis [January 1975]
- No. 2 - Levels and Trends of Mortality in Indonesia: 1961 to 1971 [October 1975]
- No. 3 - Projections of the Rural and Urban Populations of Colombia, 1965 to 2000 [December 1975]
- No. 4 - Planning for Internal Migration--A Review of Issues and Policies in Developing Countries [1977]
- No. 5 - Measurement of Infant Mortality in Less Developed Countries [August 1978]
- No. 6 - Afghanistan: A Demographic Uncertainty [September 1978]
- No. 7 - A Compilation of Age-Specific Fertility Rates for Developing Countries [December 1979]
- No. 8 - Techniques for Estimating Infant Mortality [December 1982]
- No. 9 - Fertility Decline in Developing Countries [January 1983]
- No. 10 - The Demographic Dilemma of the Soviet Union [August 1983]
- No. 11 - Estimating Fertility From Data on Children Ever Born, By Age of Mother [August 1983]
- No. 12 - International Trends and Perspectives: Aging [September 1984]
- No. 13 - Estimating Input-Output Tables from Scarce Data: Experiences of the U.S. Census Bureau's Center for International Research [October 1984]

Computer Programs

Series ISP-TR-2 - Computer Programs for Demographic Analysis [June 1976]

Complimentary copies are available to organizations in developing countries.

Copies are available to domestic organizations by sending \$20 (check or money order should be made payable to Commerce-Census) to:

Customer Services
Data User Services Division
Bureau of the Census
Washington, D.C. 20233

The following reports are not published in any formal series, but they may be obtained by sending the amount shown to the designated office:

PHOTOCOPYCIR Staff Papers (Available at no cost unless otherwise indicated)

- No. 1 - Construction of a 1977 Input-Output Table [January 1984]
No. 2 - Refinery Throughput in the U.S.S.R. [May 1984]
No. 3 - Bibliography of Regional Statistical Handbooks
in the U.S.S.R. [December 1984].....\$15
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of Indonesia: 1950 to 2010 [August 1984]..... \$20

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and Religious Group and Urban and Rural Residence: 1950 to 2010
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APPENDIX C

STAFF PARTICIPATION IN PROFESSIONAL MEETINGS, 1985

STAFF	MEETING	ACTIVITY
Campbell	Eastern Economic Assoc.	Discussant in session, "Immigration to the United States"
Johnson	Population Assoc. of Am.	Presented paper, "Analysis of Infant Mortality in Egypt Using the Hogan Model"
Peterson	Population Assoc. of Am.	Presented paper, "Central American Refugee Flows 1978 to 1984"
Quick	American Library Assoc.	Made presentation on "International Statistics at the Census Bureau"
Jamison	Assoc. for Women in Development	Participated on a panel with a presentation titled, "Data Gathering and Disaggregation: Experiences of the Center for International Research, U.S. Bureau of the Census"
Adlakha	Population Assoc. of Am.	Presented paper, "The Effect of Infant and Child Mortality on Subsequent Fertility"
Adlakha	Tenth Population Census Conf., East/West Pop. Institute	Presented paper, "The Flow and Characteristics of India Migration to the U.S."
Adlakha	International Union for the Scientific Study of Population	Presented two papers, "Infant and Child Mortality in Middle Eastern Countries" and "Determinants of Infant and Child Mortality in Tunisia"
Adlakha	Southern Regional Demographic Group	Presented paper, "The Flow and Characteristics of Migration from the ECWA Region to the U.S."
Roof	Southern Regional Demographic Group	Presented paper, "Palestinians on the Move, 1950-1984"
Way	Population Assoc. of Am.	Presented paper, "Issues and Implications of the Aging Japanese Population"
Hobbs	Interaction Annual Forum	Presented paper, "The Demographic Situation in Sub-Saharan Africa: Yesterday, Today, and Tomorrow"
Winsella	American Statistical Assoc.	Chaired session, "Analysis of Fertility Trends and Differentials"
Irriaga	International Union for the Scientific Study of Population	Presented paper, "The Implications of China's Rapid Fertility Decline"
Correy	Luxembourg Income Conference	Discussant on paper, "The Economic Well-Being of the Elderly: A Study of Seven Countries"

STAFF PARTICIPATION IN PROFESSIONAL MEETINGS, 1983 AND 1984

STAFF	MEETING	ACTIVITY
1984		
Quick	American Statistical Assoc.	Presented paper, "International Data Base"
Campbell & Baum	Southern Regional Demographic Group	Presented paper, "Recent Immigration from Africa to the United States" (co-authored with Samuel Baum)
Jamison	Second International Interdisciplinary Congress on Women	Presented paper, "A Statistical Data Base on the Status of Women"
Adlakha	Population Assoc. of Am.	Presented paper, "Biological and Social Factors Affecting Infant and Child Mortality in Jordan, Tunisia, Egypt, and Yemen"
Baum	Foreign Studies Assoc.	Discussant in session, "International Population"
Baum	Second International Symposium on Women	Presented paper, "Use of Age Group Data to Measure Progress on Reducing the Male-Female Gap in Literacy"
Torrey	American Assoc. for the Advancement of Science	Presented paper, "The Invisible Aged"
1983		
Kinsella	Joint Statistical Meetings	Presented paper, "Measuring Women's Status Based on Traditional Census and Survey Data"
Peterson	Society for International Development	Presented paper, "Central American Refugee Flows: 1978 to 1983"
Quick	Southern Regional Demographic Group	Presented paper, "International Data Base"
Jamison	Assoc. for Women in Development	Presented paper, "Women in Development: A Project of the Center for International Research"
Jamison	International Assoc. for Social Science Information Service & Technology	Presented paper, "Women in Development: A Project of the Center for International Research"
Roof	Southern Regional Demographic Group	Presented paper, "Demographic Diversity in Israel, 1950-1982"
Way & Liaga	Population Assoc. of Am.	Presented paper, "The Determinants of Excess Female Mortality"
Baum	American Statistical Assoc.	Chaired session, "Statistics on Women"
Baum	World Future Society	Presented talk, "World Population Trends"
Torrey	American Assoc. for the Advancement of Science	Presented paper, "Death and Taxes"

STAFF PARTICIPATION IN PROFESSIONAL MEETINGS, 1981 and 1982

STAFF	MEETING	ACTIVITY
1982		
Johnson	Seminar on Population Projections, CELADE Costa Rica	Presented paper, "A Population Projection Program Developed by the U.S. Bureau of the Census"
Jamison	Southern Regional Demographic Group	Presented paper, "Female Labor Force Participation and Status of Women in Developing Countries"
Arriaga	Population Assoc. of Am.	Presented paper, "The Deceleration of the Decline in Mortality: Where and Why?"
Torrey	American Statistical Assoc.	Chairperson and discussant of session, "Noncash Income-Measurement and Impact on Economic Well-Being"
1981		
Johnson	Population Assoc. of Am.	Discussant at session, "Current Research in Mortality: Methods, Data, and Findings"
Jamison	Southern Regional Demographic Group	Presented paper, "On Generalizing the Prevalence of Fertility Decline in Developing Countries"
Day	American Statistical Assoc.	Presented paper, "The Question of Indonesian Population Growth in the 1970's"
Arriaga	Population Assoc. of Am.	Chaired session, "Current Research in Mortality: Methods, Data, and Findings"
Arriaga	International Union for the Scientific Study of Population	Presented paper, "The Deceleration of the Decline of Mortality in LDC's: The Case of Latin America"
Baum	American Statistical Assoc.	Discussant in session, "International Demographic Statistics"
Baum	American Assoc. for the Advancement of Science	Presented paper, "World Population Projections Revisited"

STAFF PARTICIPATION IN PROFESSIONAL MEETINGS, 1980

STAFF	MEETING	ACTIVITY
Johnson	Population Assoc. of Am.	Discussant at session, "Recent Developments in Estimation and Analysis in Demography"
Rowe & Way	Population Assoc. of Am.	Presented paper, "Patterns and Correlates of Recent Rapid Fertility Declines in Brazil, Colombia, and Mexico"
Jamison & Baum	American Statistical Assoc.	Presented paper, "Recent Demographic Trends for the Regions, and Countries"
Hobbs & Arriaga	Population Assoc. of Am.	Presented paper, "Infant Mortality Differentials in Developing Countries"
Way	American Statistical Assoc.	Presented paper, "Consistent Demographic Estimates for Turkey: 1950-1975"
Baldwin	Conference of European Statisticians, Geneva	Participated in meeting on the co-ordination of demographic statistics within the Framework for the Integration of Social and Demographic Statistics
Arriaga	Population Assoc. of Am.	Presented paper, "Infant and Child Mortality in LDC's"
Baum	Population Assoc. of Am.	Discussant in session, "Infant Mortality"

STAFF PUBLICATIONS OUTSIDE OF THE CENSUS BUREAU

ADLAKHA

Adlakha, A.L., A.R. Cross, and J.M. Sullivan. 1985. "Fertility Estimation in Single-Round Surveys: Poplab Experience." Recent Advances in Fertility and Family Planning Research. Forthcoming.

Adlakha, A.L. and C.M. Suchindran. 1985. "Factors Affecting Infant and Child Mortality." Journal of Biosocial Science. Vol 17, No. 4.

Suchindran, C.M. and A.L. Adlakha. 1985. "Determinants of Infant and Child Mortality in Tunisia." International Population Conference. Vol. 2, pp. 299-312.

Adlakha, A.L. and C.M. Suchindran. 1985. "Infant and Child Mortality in Middle Eastern Countries." International Population Conference. Vol. 2, pp. 367-378.

Suchindran, C.M. and A.L. Adlakha. 1985. "Effect of Infant Mortality on Subsequent Fertility of Women in Jordan: A Life Table Analysis." Journal of Biosocial Science. Vol. 16, No. 2, pp. 219-229.

ARRIAGA

Arriaga, Eduardo and Peter O. Way. 1986 (forthcoming). "Determinants of Excess Female Mortality." Population Bulletin of the United Nations. New York.

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- O'Connor, Susan and Eduardo Arriaga. 1984. "Mexico's Demographic Trends and Employment Prospects." International Demographics. Vol. 3, No. 5.
- Arriaga, Eduardo. 1982. "Measurement" (of urbanization). International Encyclopedia of Population, edited by John A. Ross. MacMillan Publishing Company. Riverside, New Jersey.
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- Arriaga, Eduardo. 1980. "Direct Estimates of Infant Mortality Differentials from Birth Histories." Record of Proceedings of the World Fertility Survey Conference. Vol. 2:433-466.
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Espenshade, Thomas J., Frank B. Hobbs, and Louis G. Pol. 1981. "An Experiment in Estimating Postcensal Age Distributions of State Populations from Death Registration Data." Review of Public Data Use. Vol. 9, No. 2, pp. 97-114.

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- Sayed, Hussein Abdel-Aziz and Peter O. Way. 1985. "Life Table Analysis of Contraceptive Continuation in Rural Egypt." Working Paper No. 12. Cairo Demographic Center.
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Appendix E

COMPARISON OF CIR, WORLD BANK, AND U. N. ESTIMATES, 1980, 2000

E.1

Table 1. Population Estimates and Their Percent Differences - 1980

Country	Population (000's)			Percent Difference Between CIR and	
	Center for Inter. Research	United Nations	World Bank	United Nations	World Bank
Bangladesh	88,052	88,219	88,513	-0.2	-0.5
Brazil	122,407	121,286	121,286	0.9	0.9
Botswana	902	908	893	-0.7	1.0
Chile	11,013	11,104	11,104	-0.8	-0.8
Colombia	26,611	25,794	25,892	3.1	2.7
Cuba	9,658	9,732	9,665	-0.8	-0.1
Indonesia	154,936	150,958	146,345	2.6	5.5
Israel	3,879	3,878	3,871	z	0.2
Korea, Rep. of	39,565	38,124	38,124	3.6	3.6
Liberia	1,898	1,871	1,873	1.4	1.3
Malaysia	14,001	13,870	13,870	0.9	0.9
Mexico	70,111	69,393	69,393	1.0	1.0
Morocco	20,969	20,050	19,245	4.4	8.2
Nepal	14,992	14,667	14,640	2.2	2.3
Nigeria	90,035	80,555	84,732	10.5	5.9
Pakistan	85,219	87,172	82,061	-2.3	3.7
Philippines	50,509	48,317	48,300	4.3	4.4
South Africa	28,723	28,612	28,723	0.4	z
Thailand	47,669	46,455	46,455	2.5	2.5
Turkey	46,025	44,468	44,438	3.4	3.4
ALL COUNTRIES	927,174	905,433	899,423	2.3	3.0

Note: z represents less than .05 percent

Sources: Bureau of the Census. Center for International Research, World Population 1984, and Detailed Statistics on the Urban and Rural Population of Nigeria. United Nations. World Population Prospects: Estimates and Projections as Assessed in 1982. New York, 1985.

World Bank. World Population Projections 1984. Washington, D.C. 1984.

Table 2. Population Estimates and Their Percent Differences - 2000

Country	Population (000's)			Percent Difference Between CIR and	
	Center for Inter. Research	United Nations	World Bank	United Nations	World Bank
Bangladesh	161,706	145,800	156,744	9.8	3.1
Brazil	189,581	179,487	181,115	5.3	4.5
Botswana	1,756	1,865	1,818	-6.2	-3.5
Chile	14,441	14,934	14,720	-3.4	-1.9
Colombia	38,569	37,999	37,457	1.5	2.9
Cuba	11,852	11,718	11,735	1.1	1.0
Indonesia	226,665	204,486	211,994	9.8	6.5
Israel	5,248	5,376	5,379	-2.4	-2.5
Korea, Rep. of	52,016	49,485	50,490	4.9	2.9
Liberia	3,603	3,564	3,746	1.1	-4.0
Malaysia	20,592	20,615	20,540	-0.1	0.3
Mexico	112,777	109,180	109,411	3.2	3.0
Morocco	35,675	36,325	31,191	-1.8	12.6
Nepal	24,612	23,048	24,265	6.4	1.4
Nigeria	159,291	161,930	169,325	-1.7	-6.3
Pakistan	148,706	142,554	139,593	4.1	6.1
Philippines	75,492	74,810	73,299	0.9	2.9
South Africa	44,844	46,918	52,400	-4.6	-16.8
Thailand	65,511	66,115	67,865	-0.9	-3.6
Turkey	66,882	68,466	65,419	-2.4	2.2
ALL COUNTRIES	1,459,819	1,404,675	1,428,506	3.8	2.1

Sources: Same as Table 1.

Table 3. Annual Average Population Growth Rates for the Period 1980-2000

Country	Population Growth Rates (Percent)		
	Center for Inter. Research	United Nations	World Bank
Bangladesh	3.0	2.5	2.9
Brazil	2.2	2.0	2.0
Botswana	3.3	3.6	3.6
Chile	1.4	1.5	1.4
Colombia	1.9	1.9	1.8
Cuba	1.0	0.9	1.0
Indonesia	1.9	1.5	1.9
Israel	1.5	1.6	1.6
Korea, Rep. of	1.4	1.3	1.4
Liberia	3.2	3.2	3.5
Malaysia	1.9	2.0	2.0
Mexico	2.4	2.3	2.3
Morocco	2.7	3.0	2.4
Nepal	2.5	2.3	2.5
Nigeria	2.9	3.5	3.5
Pakistan	2.8	2.5	2.7
Philippines	2.0	2.2	2.1
South Africa	2.2	2.5	3.0
Thailand	1.6	1.8	1.9
Turkey	1.9	2.2	1.9
ALL COUNTRIES	2.3	2.2	2.3

Sources: Calculated from Tables 1 and 2.

Table 4. Population Increases from 1980 to 2000 and Their Percent Differences

Country	Increase in population (000's)			Percent difference between CIR and	
	Center for Inter. Research	United Nations	World Bank	United Nations	World Bank
Bangladesh	73,654	57,581	68,231	21.8	7.4
Brazil	67,174	58,201	59,829	13.4	10.9
Botswana	854	957	925	-12.1	-8.3
Chile	3,428	3,830	3,616	-11.7	-5.5
Colombia	11,958	12,205	11,565	-2.1	3.3
Cuba	2,194	1,986	2,070	9.5	5.7
Indonesia	71,729	53,528	65,649	25.4	8.5
Israel	1,369	1,498	1,508	-9.4	-10.2
Korea, Rep. of	12,451	11,361	12,366	8.8	0.7
Liberia	1,705	1,693	1,873	0.7	-9.9
Malaysia	6,591	6,745	6,670	-2.3	-1.2
Mexico	42,666	39,787	40,018	6.7	6.2
Morocco	14,706	16,275	11,946	-10.7	18.8
Nepal	9,620	8,381	9,625	12.9	-0.1
Nigeria	69,256	81,375	84,593	-17.5	-22.1
Pakistan	63,487	55,382	57,532	12.8	9.4
Philippines	24,983	26,493	24,999	-6.0	-0.1
South Africa	16,121	18,306	23,677	-13.6	-46.9
Thailand	17,842	19,660	21,410	-10.2	-20.0
Turkey	20,857	23,998	20,981	-15.1	-0.6
ALL COUNTRIES	532,645	499,242	529,083	6.3	0.7

Sources: Calculated from Tables 1 and 2.