

THE DYNAMIC DATA BASE

AN INTERNATIONAL STATISTICAL INSTITUTE ARCHIVE

The study of the population structure and dynamics of developing countries relies heavily on census and sample survey data, due to the comprehensiveness of censuses and the depth and quality of surveys compared to the often inadequate registration of vital events. However in the past census and survey data have not been fully exploited despite the expense and staff resources devoted to their collection. There were many reasons for the limited analyses of these data: restricted availability of computing hardware, expensive and inappropriate software, the lack of analytic and programming skills, and low standards of documentation and archiving.

In 1984, in response to these deficiencies, the International Statistical Institute (ISI) through its Research Centre and the International Union for Scientific Study of Population (IUSSP) created the Dynamic Data Base (DDB). The DDB promotes the analysis of high quality survey data on fertility, mortality and closely related topics, through a wide range of activities. The DDB :

- 1) Assembles, documents and make accessible an expanding archive of survey data;
- 2) Develops and distributes survey processing software;
- 3) Provides tabulations and analyses on request;
- 4) Maintains bibliographic information on research that uses its data;
- 5) Advises on analytic methodological research; and
- 6) Distributes publications.

Biennially, the DDB issues a Catalogue of Survey Data Files. A new activity is the production of a Newsletter. To date two have been published and circulated to all DDB users and all members of the IUSSP.

At present, approximately 225 fertility survey data sets are archived in the DDB. It was initially supported by a three-year grant, of about \$ 300 000 per annum, from the United States Agency for International Development. In 1988, the UN Population Fund (UNFPA) awarded a grant of about \$ 950 000 representing the core funding of a four-year project : Data and Training for Statistical Demography.

The DDB has already made an extremely valuable contribution to demographic research. The data base has been steadily expanded by the acquisition of new files and as a consequence, demand for data sets has remained high. DDB staff have been active in training demographers from developing countries and the analytical software has been improved.

Data Distribution

The DDB receives requests for the provision of data sets at a rate of about two per week. Many requests are for a single data set, but an equal number involve multiple sets for regional or global comparisons. On average, four data files are used per research project. Data files remain the property of the originating authorities, who decide the conditions under which outside researchers may use the data. By respecting the wishes of donor organizations, though the ISI tries to encourage them to give very liberal access, the likelihood is increased that new data sets will be added as they become available.

Computerized data dictionaries and marginal distributions are prepared and distributed automatically with the primary data files. Inconsistencies in the data are noted and users alerted to these.

A large majority of users are scholars from developing countries who wish to analyze data from their own country or region. Many of them are studying at universities in Europe and North America, but the number of requests from users from developing countries is steadily increasing as analytical expertise and the availability of microcomputers spread. Demand for data sets also comes from institutions, such as regional training and research centres of the United Nations, based in Accra, Yaoundé, Addis Ababa, Cairo, Santiago, Bangkok, Kerala and Louvain-la-Neuve.

The range of research topics is very wide. In addition to fertility and mortality trends and determinants, DDB data have proved useful in the study of contraception, marriage, breastfeeding, use of health services, household composition, labour force participation, the status of women, and many other related topics. The results have helped policy making at national and international levels.

Provision of Tabulations, Analyses and Software

Institutions or individual users of the data sometimes prefer to request DDB to provide specific tabulations and analyses, rather than to acquire the files and undertake the analysis themselves.

In addition the DDB supports and distributes software for processing and analysis. The software can be easily implemented on most computer systems, including microcomputers. Botswana, China, India, Indonesia, Morocco, Sri Lanka and Mauritius are among the developing countries that have benefitted recently from this service.

Training in Data Processing and Analysis

The DDB is far from being simply a facility for distribution of data and software. Staff play an active role in training statisticians and demographers from developing countries thus establishing an enduring capability to use survey data for the benefit of understanding society and formulating and evaluating policies.

For several years, the ISIRC has provided assistance to China in the conduct of fertility surveys. A series of training workshops on archiving, data processing and analysis has been organized for participants from the central and provincial statistical offices in China. Some of these workshops were held in China and some at the ISI Permanent Office in Voorburg. A national seminar on the results of Phase I and II of the In-Depth Fertility Survey, which are archived in the DDB, is scheduled to take place in Beijing 4-8 October 1989.

In 1987, the DDB provided extensive training in computer and analysis skills to researchers from Benin, Mauritania, Morocco and Tunisia, and assistance was given to the UN Economic Commission for Africa in a workshop on childhood mortality.

As part of the UNFPA funded project a series of training workshops on the Statistical Analysis of Fertility Data are currently being undertaken. The first workshop was held in Accra, Ghana, at the UN Regional Institute for Population Studies (RIPS), 14 November-9 December 1988. Twenty six participants from twelve English-speaking African countries attended the workshop. Six professors from RIPS and University of Ghana participated in the training programme on their specific areas of expertise. The course required extensive use of microcomputers, so a laboratory of 12 machines and 4 printers was set up. This means that RIPS now has a permanent computing facility. During the workshop participants analyzed data from various fertility surveys available from the DDB; often they chose to use the one relating to their country of origin. They produced a total of twelve papers, using their newly acquired computing and analytic skills. Complementary funding for specific activities has been provided by the European Economic Community and the Sasakawa Peace Foundation (Japan).

The second four-week workshop will be held in Yaoundé, Cameroun, at the UN Institut de Formation et de Recherches Démographiques (IFORD), 2-28 October 1989. The training approach will be very similar to the Accra workshop except that participants will be selected from French-speaking African countries. Complementary funding for participants' expenses is being sought from USAID, IDRC (Canada) and Population Council. A team of three consultants, including a UNECA expert in population studies, will be presenting the workshop. Training workshops in the next two years will probably be carried out in one Arab country and one Asian country.

In addition to this programme, the DDB is organizing a two-day short course in Computer Software for the Statistical Analysis of Demographic Data in New Delhi, at the XXIst IUSSP General Conference, in September 1989. A good practical working knowledge of some statistical software packages will be a pre-requisite for participation.

Complementarity of the DDB with UN Data Bases

This brief review of the activities of the last few years makes it clear that the DDB is already a very valuable resource. Moreover there are plans to expand the archive not only by acquiring more data sets relating to demographic surveys (possibilities are DHS, Gulf Survey, PAPCHILD, European Fertility and Family Survey) but also to develop by covering new fields. For example discussions have taken place on the extension of the database to include data on women in development. The ISI welcomes proposals from interested agencies regarding the inclusion of new topics:

Members of the UN statistical system have established a number of significant databases and more are planned. As the DDB expands its scope in the future there might appear to be a risk of duplication of effort, not to say competition for resources. For example, the DDB proposes to expand its holdings of survey on the status and rôle of women; at the same time the UN Statistical Office has established a WISTAT database covering the same concern.

We believe that the functions of the DDB are different from those of UN databases. Furthermore we believe that the functions are complementary. The DDB:

- 1) Archives primary data and methodological materials to explain how the data were collected and processed;
- 2) Serves the needs of researchers especially those from developing countries;
- 3) Provides training to enable researchers in developing countries to use their data more effectively; and
- 4) Offers technical assistance to countries and regional and international organizations on the methodology for creating and maintaining their own databases.

The UN databases, primarily:

- 1) Archive secondary data and background documentation related to these data;
- 2) Focus on the needs of the UN agency and other members of the UN statistical system;
- 3) Offer very limited user services to others outside the system who may wish to have a copy of the database.

However, the ISI is sensitive to the need to maintain active links between the DDB and other databases. Through its consultative status with the Economic and Social Council, observer status in the ACC Sub-Committee on Statistical Activities and other fora, and its partnership with the UN Statistical Office in areas of technical cooperation in statistics, the ISI seeks to complement the activities of the UN statistical system in working towards statistical development on a worldwide basis.

Finally the ISI hopes to continue to utilise its accumulated expertise by providing both international and national agencies with assistance in setting up their own data banks and in fully exploiting available data.

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