A SURVEY OF INSTITUTIONAL DEVELOPMENT NEEDS AND CAPABILITIES IN DEVELOPING COUNTRIES

VOLUME ONE

Demography and Related Social Sciences

Fertility Regulation and Related Health Sciences

THE POPULATION COUNCIL

JANUARY 1975

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C. 20523

BIBLIOGRAPHIC INPUT SHEET

FOR AID USE ONLY

1. SUBJECT CLASSIFICATION

A. PRIMARY
Population PC00-0000-0000

B. SECONDARY
Family planning

2. TITLE AND SUBTITLE

A survey of institutional development needs and capabilities in developing countries. vol. 1: Demography and related social sciences, fertility regulation and related health sciences

3. AUTHOR(S)

(101) Population Council, New York, N.Y.

4. DOCUMENT DATE	5. NUMBER OF PAGES	6. ARC NUMBER
1975	351p.	ARC 301.3207.P831

7. REFERENCE ORGANIZATION NAME AND ADDRESS

Pop. Council

8. SUPPLEMENTARY NOTES (Sponsoring Organization, Publishers, Availability)

9. ABSTRACT

10. CONTROL NUMBER	11. PRICE OF DOCUMENT
PN-AAG-914	

12. DESCRIPTORS

Family planning education
Demography
Institution building
Population policy
Medical education
Universities
Educational facilities

13. PROJECT NUMBER
931096700

14. CONTRACT NUMBER
AID/csd-3435

15. TYPE OF DOCUMENT

AID 590-1 (4-74)

A SURVEY OF INSTITUTIONAL DEVELOPMENT NEEDS AND CAPABILITIES IN DEVELOPING COUNTRIES

VOLUME ONE

Demography and Related Social Sciences

Fertility Regulation and Related Health Sciences

THE POPULATION COUNCIL
245 Park Avenue
New York, N.Y. 10017

Support for the preparation of this report was provided by the Office of Population, United States Agency for International Development, under grant AID/csd-3435. The Population Council gratefully acknowledges the support and cooperation afforded its staff by the Educational Services Division of the Office of Population and by numerous AID missions abroad.

The Council also gratefully acknowledges the assistance it received from numerous consultants and colleagues in other organizations in the preparation of the report.

A SURVEY OF INSTITUTIONAL DEVELOPMENT NEEDS AND CAPABILITIES IN DEVELOPING COUNTRIES

VOLUME ONE

Demography and Related Social Sciences

Fertility Regulation and Related Health Sciences

A SURVEY OF INSTITUTIONAL DEVELOPMENT NEEDS AND CAPABILITIES IN DEVELOPING COUNTRIES

VOLUME ONE: Demography and Related Social Sciences
Fertility Regulation and Related Health Sciences

VOLUME TWO: Biomedical Research in Reproductive Biology in Countries of the Developing World

VOLUME THREE: Country Reports: Sub-Saharan Africa

VOLUME FOUR: Country Reports: North Africa and the Middle East

VOLUME FIVE: Country Reports: South and East Asia

VOLUME SIX: Country Reports: Latin America

CONTENTS

VOLUME ONE: Demography and Related Social Sciences

Fertility Regulation and Related Health Sciences

INTRODUCTION AND SYNOPSIS

TERMS OF REFERENCE

Under a grant from the United States Agency for International Development (AID/csd-3435), the Population Council began in 1973 a survey of institutional capacities for population-related teaching and research in Africa, Asia, Latin America, and the Middle East. The broad purpose of the survey was to identify such activities as comprehensively as possible, and to develop a rationale and methodology for planning future institutional development undertakings not only by the Population Council, but also by others interested in supporting such activities.

The Population Council has been engaged in institution building in less-developed countries for most of its organizational life through numerous grants in support of teaching, research, and fellowships. At the time Grant AID/csd-3435 was made, the Council had sixteen years of experience in such activities and was then providing support at some level to population programs in 25 institutions in the developing world. In support of its overseas activities, including institutional development, the Council had at that time a field staff of 31 professionals located in 18 institutional, country, or regional posts.

In 1970, the Council conducted a preliminary survey of the state of training in demography and family planning in the four developing regions. The survey indicated that aside from the then existing United Nations regional population centers in Chile, Egypt, and India, only three universities in Sub-Saharan Africa offered 3 or more courses in demography (out of 40 surveyed), 14 universities in Asia[a] (out of 186), 4 universities in Latin America (out of

128), and 12 universities in North Africa and the Middle East (out of 63). Training in family planning was even less available, with only 4 African, 15 Asian, 4 Latin American, and 6 North African/Middle Eastern universities offering any full courses in family planning.

Grant AID/csd-3435 was intended to enable the Population Council to "expand its studies of institutional development needs of universities and research institutions in the ... major developing regions and to develop methodology and programs for continuous surveillance of institutional development and needs for institutional development in the population programs of universities."

This report is the result of the Council's survey of the state of population teaching and research in the developing world as it appeared in late 1973 and in 1974. As will be seen in the country and regional sections, the institutional development scene has changed dramatically since the preliminary survey of 1970.

CONDUCT OF THE SURVEY

To plan and supervise the survey, a committee was established consisting of representatives of each of the Council's three divisions: Demographic, Technical Assistance, and Biomedical. Its responsibilities included determining the substantive and geographic scope of the survey; developing a generally comparable set of definitions and data categories; and assigning personnel to tasks in the conduct of the survey.

The committee decided that each division would initially prepare separate reports on demography and related social sciences, fertility regulation and related health sciences, and reproductive biology. The Demographic and Technical Assistance Divisions each prepared chapters on goals and policies for

institutional development supported in each instance by four regional chapters that provide an overview of findings and priorities. The reports of the two divisions are presented in parallel fashion in Volume One of the report. The Biomedical Division's report on reproductive biology is presented separately as Volume Two.

The committee devoted considerable effort to attempts to develop quantitative criteria for inclusion of countries and institutions in the survey. Several sets of criteria were explored, including various relationships among population size, the existence of national population policies, assessments of country significance in regional or international terms, and the feasibility of conducting a survey of each country. Consideration was also given to including several quantitative indicators of socio-economic development in the criteria. None of the "empirical" measures proved to be entirely satisfactory. In practice, countries and institutions were included in the survey on the basis of a variety of considerations, of which the most important was the informed judgment of professionals in the population field who have had extensive experience working in the countries and with the institutions covered. By the extensive use of the knowledge and experience of special consultants, of population professionals in other organizations, and of Population Council staff in New York and around the world, we believe we have achieved a fairly comprehensive review of current programs and of reasonably likely prospects for institutional development for population teaching and research in the developing world.

A total of 65 countries are covered in the report, of which 16 are in Sub-Saharan Africa, 17 in North Africa and the Middle East, 12 in Asia, and 20 in Latin America and the Caribbean. Twenty-eight of the countries were surveyed by all three divisions. Country chapters prepared by the Biomedical

Division appear in Volume Two of the report. Volumes Three through Six contain chapters on those countries surveyed by the Demographic and Technical Assistance Divisions. (A small number of countries or regional institutions not covered in the country chapters are briefly discussed in the regional overviews in Volume One of the Report.)

In terms of institutions, the report generally focuses on universities, major schools for paramedical personnel, and hospitals, but in some countries it also covers research institutes and government agencies that have population training and research functions.

SYNOPSIS

Volume One of the report is divided into two parts. Part I is the main report on demography and related social sciences. Part II is the main report on fertility regulation and related health sciences. Each part consists of a chapter on goals and policies for institutional development followed by chapters reviewing the state of and prospects for institutional development in each of the four regions covered.

Volume Two is a review of research in reproductive biology in countries of the developing world. The volume contains sections on the Caribbean, Central America, and Mexico; South America (northern part); South America (southern part); Sub-Saharan Africa; North Africa and the Middle East; Afghanistan, Iran, Iraq, and Turkey; Bangladesh, India, Pakistan, and Sri Lanka; Southeast Asia; and Hong Kong, Korea, Philippines, and Taiwan. Each section begins with an area survey followed by reports on the status of research in reproductive biology at the major institutions of each major country in the region.

Substantively, Volumes One and Two of the Report, written from different perspectives, share some common features. The ultimate goal of institutional development is generally viewed as the creation or enhancement of self-sustaining local capacities for high-level teaching, research, and services directed at the solution of population problems in developing countries. There is also agreement that external donor agencies can assist in the process by identifying national scholars, researchers, medical practitioners, planners and administrators with appropriate interests, and by limited provision of financial, technical, and professional support. However, the sustained encouragement, promulgation, and implementation of national population policies must rest on local funding and trained and committed personnel. Moreover, institutional development activities must employ strategies and timetables that reflect differing local contexts. There are also some differences in perspective among the three substantive approaches.

Demography and Related Social Sciences

From the perspective of the Demographic Division, concerned with demography and related social sciences, there is greater emphasis on institutional development as a contribution to policy design. From this perspective, the ultimate goal of institutional development activities is improved public policies responding to, or adjusting, population processes, promulgated by national leaders convinced of the relationship of population dynamics to national development goals, and implemented by trained local personnel. Institutional development is in this view an aspect of guided social change, with the ultimate goal of producing social, economic, and political arrangements that effectively solve national population problems, and the intermediate goal of producing local capabilities necessary for implementing policies directed

toward that objective.

The focus of these efforts is primarily on universities and autonomous research institutes. Such institutions play key roles in opinion formation, professional development, and the systematic adaption of knowledge to national needs and contexts. They frequently influence the formation of national population policy directly by providing consultants, by conducting research "on demand," by evaluating national family planning programs, and by having faculty serve on government bodies charged with the examination of population as a factor in national development. A particularly important role for those institutions is the provision of seminars and short-term training to government officials to broaden their population awareness and to develop their basic analytic skills.

Fertility Regulation and Related Health Sciences

The Technical Assistance Division, concerned with fertility regulation and related health sciences, places more emphasis on institutional development to increase local capacities for the design and monitoring of health programs and the provision of services aimed at reducing birth rates. The goal of institutional development is thus to assist in the development of health institutions whose goals are to acquire knowledge of fertility regulation, to disseminate that knowledge through the training of health manpower, and to bring such knowledge to bear directly on national population and related health problems.

In this context, knowledge refers to a variety of scientific facts whose relevance will vary in relation to the specific problems encountered in each country. In countries that are only beginning to recognize the impact of fertility on the health of their populations and on their potential for development, the production of knowledge in assessing the interrelationships between fertility and health could provide the decision maker with locally produced

data on which to base his priorities. Where family planning is recognized as an individual right and supported for its health benefits, the acquisition of knowledge in contraceptive technology and its dissemination through the medical and paramedical professions is a relevant approach. Where large-scale action programs are implemented for health or demographic reasons, knowledge will apply to the capacity to plan, implement, and evaluate such programs. This involves knowledge in health planning, manpower development in health administration including operational research, in epidemiology and health statistics, and in community health development. Dissemination of knowledge should not be restricted to traditional health personnel, as it has been demonstrated in some countries that other community workers can have a broader impact on the population through their number and organization than can a limited number of highly trained health workers. The final aim of institutional development is to improve fertility regulation services. Consequently, knowledge should be directed not only at an understanding of the causes and consequences of excessive or unwanted fertility but at equipping the health or community worker to act on the problem at his particular level of action.

Universities (medical schools and schools of public health) are the principal targets for institutional development in most countries because of their traditional roles as local sources of knowledge and their access to national elites. At the same time, less prestigious institutions such as schools of medical assistants, or paramedical personnel, and of auxiliary health workers must also be considered appropriate foci. Not only do such institutions play a key role in training personnel to provide fertility regulation services, but their graduates play an important role in stimulating demand for such services.

Reproductive Physiology

The Biomedical Division is concerned with the generation of knowledge of the biology of reproduction, with the development of improved biological methods of fertility control, and with studies of the biological implications, including toxicity and pathology, of various methods of fertility control. While basic research in reproductive physiology is often best carried out in laboratories of the developed countries, many biological problems are unique to various areas of the developing world and may have significant or critical impact on the acceptability of various methods of fertility control. Such problems include malnutrition, parasitism, extremes of climate, and variations in local disease patterns (e.g., the high Asian rates of choriocarcinoma). In addition, differing cultural contexts may affect the acceptability of fertility control methods developed elsewhere. Breast feeding, for example, is far more important for infants in developing countries, and methods of fertility regulation must not impair lactation. Intermittent vaginal bleeding has different implications in Moslem countries, where menstruating women may not enter the mosque. Thus biomedical studies must be carried on in developing countries if their critical problems are to be properly evaluated. Local personnel with specific interest in important local problems must be trained and equipped to evaluate and monitor the biomedical impact of their own fertility control programs. They will also be of great help in supporting governmental efforts toward fertility control, for family planning programs in the developing world cannot succeed on any broad scale without strong national political support.

For all these reasons, major developing countries with large populations and rapid growth rates need to have the biomedical resources in both trained professionals and in equipped laboratories to study those problems in reproductive biology that are peculiar to their own area. Inasmuch as most

such countries do not at present have these resources, they must be created through programs of institutional development in biomedicine.

Criteria for Selecting Institutional Development Projects

The following criteria for external assistance to institutional development activities in support of training and research emerge from the report.

In general, priority should be given to countries in which population problems are most acute (e.g., large national populations, maldistribution of population, high growth rates, and limited economic resources); where a commitment exists for taking positive action to address those problems; and where successful programs might have regional impact.

Priority should be given to institutions in which there is a strong commitment to the establishment of population programs, where strong leadership potential exists, and where there are reasonable expectations that local training and research capacities could become self-sustaining within the five to ten year period that is typically required to firmly establish such programs. Similarly, external agencies should undertake only as many institutional development projects as they can reasonably expect to continue supporting for that period of time at annual funding levels ranging from $20,000 to $100,000.

Population programs should be developed within the broader context of the social or health sciences, rather than as independent and isolated activities that are likely to have only limited impact. Careful consideration must therefore be given to existing institutional strengths, previous commitments by local universities and external agencies, and the likely impact of such programs on the society at large. Wherever possible, population programs should be built onto already existing institutional foundations and should avoid unnecessary

duplication of existing efforts that can lead to excessive competition for scarce personnel and other resources.

Host institutions should make annual reviews of their substantive progress, funding, personnel, and related matters in cooperation with the external organizations participating in their development during which three to five year plans for the future are elaborated and documented. Similarly, periodic monitoring of the overall status of institutional development around the world should be undertaken, to provide a basis upon which to begin new projects or to redirect existing ones.

Role of the Population Council

Population Council activities in support of institutional development projects fall into three broad categories. Council support of specific projects may fall into one or more of these categories.

Professional partnership is the most intensive and selective relationship, involving consultation on research and technical matters, assistance in the recruitment of staff for the institutions, placing Population Council staff at the institution for specific periods of time, inviting staff from partner institutions to visit and work at the Council, and undertaking joint research projects.

Fund-raising and grant-making activities involve several different types of relationships with donors and grantees. The Council administers funds in behalf of recipient institutions that are granted to the Council specifically for these purposes. In this way, funding by AID, the World Bank, other international agencies, and private foundations has been matched with specific needs of institutions. The Council also makes grants to institutions from its general purpose funds. Thirdly, the Council assists institutions to obtain funds

directly from donors other than the Council by participating as advisor in planning of programs that merit funding.

Technical support services provided by the Council include administration of staff development programs by our Fellowship Office or through special programs; provision of books, equipment, and computer software; and the Council's general information program which includes publication of four regular periodicals and several books each year.

PART I

Demography and Related Social Sciences

Chapter 1

GOALS AND POLICIES FOR INSTITUTIONAL DEVELOPMENT DEMOGRAPHY AND RELATED SOCIAL SCIENCES

THE CHALLENGE TO INTERNATIONAL POPULATION ASSISTANCE

Institutional development in demography and related social sciences is a major means for creating and sustaining positive public approaches to population policy. It consists of building sustainable institutional capacities for training persons, producing locally-adapted knowledge, and providing technical services to bodies responsible for policy and social action. The most satisfactory settings for these institutional capacities are universities in most countries, and independent institutes and specialized agencies of government in others. International resources are commonly required in combination with national resources to initiate and sustain institutional development.

Knowledge and knowledgeable persons are needed in every country to address problems of population policy, and to implement and evaluate those policies. The evolution of every national population needs to be scrutinized and, if not found to be optimal, demographic processes should be modified in the public interest. This is especially evident where birth rates are high, death rates low, and the population exploding at rates that prevent satisfactory progress toward social and economic objectives.

Exactly what the public authorities should do about the situation is not always clear. Local knowledge and skilled persons are needed to develop and implement a satisfactory response. In most countries there exists no adequate understanding, let alone consensus concerning the precise possibilities for modifying demographic processes or the value for society which such modifications would have. This is hardly surprising because in most areas of public policy

there is lack of information, confusion about the likely consequences of alternative policy options, and genuine differences of interest among social groups concerning the value of the results.

Population policy has to be made under the same conditions as other policies. Consequently, information and knowledge must be accumulated, authenticated, and accorded authority. Persons must be trained, given experience, and acquire audiences that listen with confidence, but professional advice given must be sound. The authority of experienced professionals who claim to know how to assess and deal with population problems is necessary. The professionals must be supported by technicians and service workers. A constitutency of educated persons among the public who understand and accept both the diagnosis in its essentials, and the assessment of options for public action is also necessary. Institutional development aims to create a dynamic body of local knowledge, informed public, and knowledgeable skilled persons who can carry forward the needed observation, analysis, and conduct of public policy.

The variety and complexity of population problems throughout the world should not be underestimated. In a number of populous Asian countries, high fertility is combined with such severe poverty that researchers are asking how to raise economic productivity and control fertility jointly in the same action network. They have found that separate or sequential programs for development and population are ineffective. For much of Africa, researchers are predicting higher fertility as health and nutrition conditions improve. The question is then posed as to how governments can act concurrently with economic progress to stimulate individual and social demand for timely control of fertility. In these conditions, provision of contraceptive services is a challenging and useful approach, provided policies are also adopted to stimulate demand.

In the oil-rich countries of the Near East and North Africa, the prospective supply of material goods is abundant relative to population growth. From strictly national points of view, substantial population growth during the next 50 to 100 years does not appear to some analysts to threaten the individual members of the society with significant material losses. Instead, more population appears to offer the prospect of strengthening societies collectively in what may be perceived as a potentially hostile world. This analysis is most likely mistaken because the oil resources are exhaustible, domestic production and services are limited even if imports are not, and rapid urbanization is adversely affecting the quality of life already. To investigate these relationships and to come to an informed consensus about them, institutional development is needed in the resource-rich developing countries as urgently as in less well-endowed nations.

Latin America has its own special population problems. In a number of Latin countries, urbanization has proceeded so rapidly and cities have reached such a size that present and future city residents now have an urgent stake in national population control. Urban areas are growing more by virtue of birth rates of 35 to 45 per thousand than by urbanward migration of 15 to 30 per thousand. Furthermore, even the smaller migration component of urbanization is supported by high rural fertility which peasants have little incentive to control as long as an attractive outlet for migration is open. These matters require understanding and analysis followed by public as well as individual action.

One of the lessons of the World Population Conference at Bucharest was that many leaders are poorly informed about demographic processes in their own countries, and are even less well advised on how to interpret what little information their statistical and research offices do possess. Nevertheless,

at Bucharest population was a subject about which practically every policy-maker wished to take a position. Population is considered by them to be important in some undefined manner. There were solid reasons for the display of misinformation and the lack of accepted paradigms with which to interpret population processes.

Institutional development is a new focus of attention. It is thus far only thinly scattered over the developing world. And it has only barely begun to do the job of building up local understanding, information, and expertise. Within a decade the content of a World Population Conference could change radically, but only if major investments are made now throughout the developing world in the production of locally adapted knowledge and persons who can form a company of available and energetic professionals that will bring knowledge to bear upon policy processes.

Since problems of population policy are everywhere different, an incentive to build local capacity to provide local solutions is present if it can be awakened. Indeed, where the need to know and to train persons is locally recognized, investments are being made by national authorities in new institutional capacities to deal with population questions. Because of the close connection with university education, and particularly with social science education, countries that are strong in these fields tend to be the most active ones. Institutional development is essentially a national process, and national interests will be predominant in its design and execution.

The basic motivation for providing international assistance to national institutional development is the substantial international community of interest in the results. International assistance is frequently interpreted as a process for distributing resources from those who have to those who have not, and is justified on that ground alone. It should be recognized, however,

that population problems are not strictly national problems contained within national boundaries. The effects of population processes are transmitted internationally by the economic and environmental conditions to which the population processes contribute. These international repercussions are important and should be included in the rationale for international population assistance.

In addition, demographic mobility is on the increase, internationally as well as internally. Excess population growth relative to economic opportunities leads not only to rural-urban migration, but also to movements from lower wage to higher wage national job markets. Major movements of this type, involving millions of workers and their families, are leading to major population transfers to Western Europe from the Southern and Eastern Mediterranean countries, within the Arab countries of Western Asia and North Africa, within the Americas and in parts of Africa. The economic-demographic problem of excessively rapid urbanization within countries has a parallel in the transfer of excess fertility from low to high economic growth countries.

Another basis for international assistance is that knowledge and experience are exportable "commodities" which may be transferred <u>from</u> the aid receiving countries as well as <u>to</u> them. The nations in need of such knowledge include those providing assistance, since they also can benefit from new knowledge and experience in the developing countries. Such benefits have been realized on only a small scale to date because of the limited commitment to knowledge production in the developing countries.

Thus, it follows that international assistance agencies act in the interests of their constituencies when they invest in national institutional development abroad. In order for them to join most effectively with nationally motivated efforts in the same direction, a partnership should be established.

The goals of each of the partners may differ in some degree, but the overlap is broad and a sufficient basis for strong mutual effort. There is a shared need for knowledge, expertise, and collective action that can cement the partnership far more securely than the elusive goals of resource redistribution among nations.

The pursuit of successful institutional development requires an understanding of the process by both national and external agencies. For both there is also need to define and consider the options for assistance by international agencies that are available. A modest literature has emerged on these questions[1], and the present report is a contribution in the same direction. In the field of demography and related social sciences it is useful to begin by setting out briefly the aims of institutional development, and then to consider how institutions are developed in the fields of training, research, and service. The tasks outlined are major ones requiring resource commitments over many years. The present survey identifies the main lines of approach that could be pursued by national and international authorities in partnership during the years immediately ahead.

---

[1] Rolf P. Lynton, Building Population Programs in Universities: A Brief Guide for Policy Makers (University of North Carolina, Chapel Hill, 1974); W. Parker Mauldin and Barnett F. Baron, "Donor Agencies and Population Training," (paper presented to meeting of Population Association of America, New York, April 1974); Alvin S. Lackey for U.S. Agency for International Development, "University Programs and Population Centers," (Bellagio Conference, May 1973); Paul Demeny and Lucien A. Gregg, "Current University Activities in the Field of Population: An Overview" (Jogjakarta, 1972); Kenneth W. Thompson, Higher Education for National Development: One Model for Technical Assistance (International Council for Educational Development, New York, 1972).

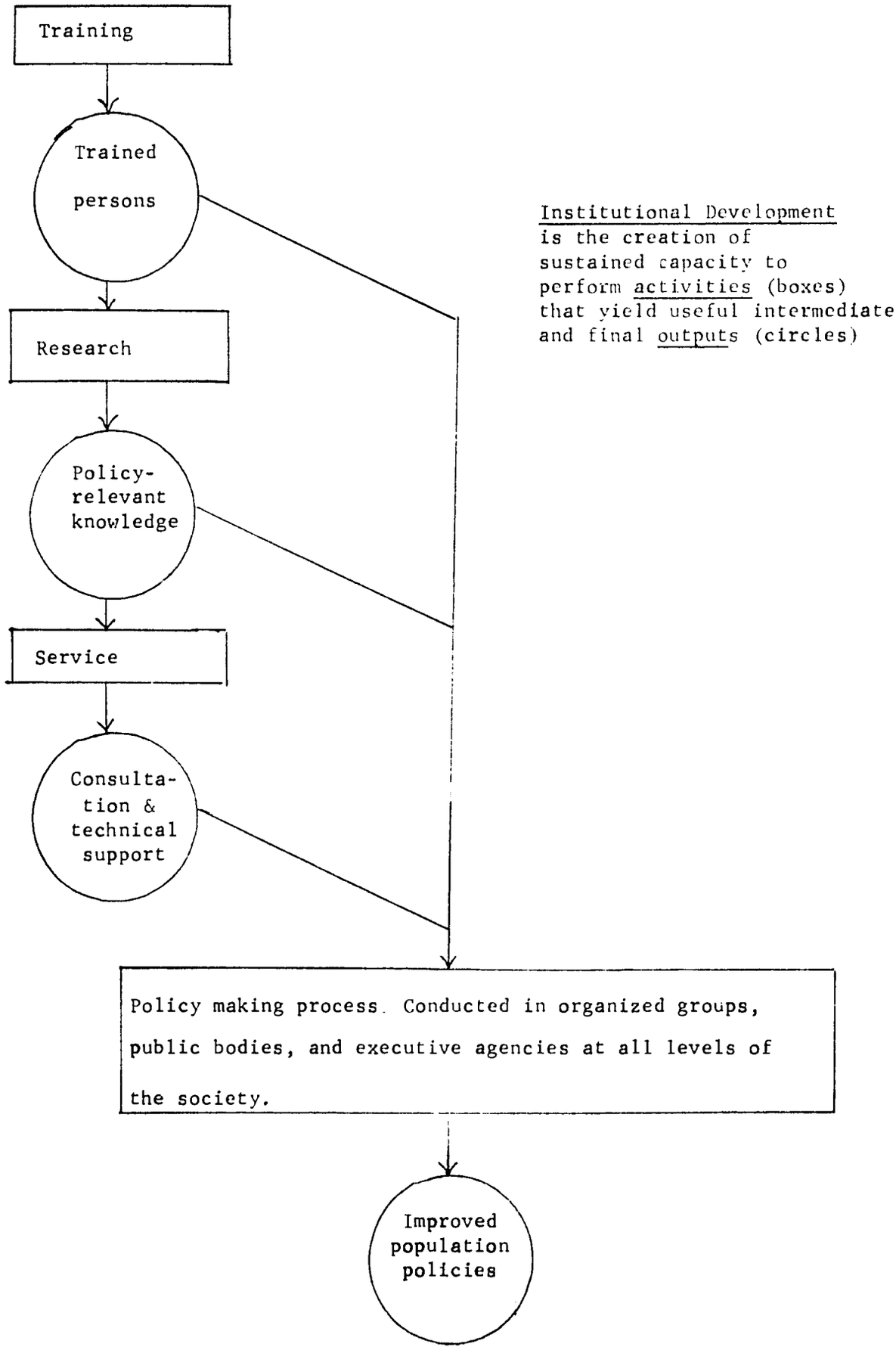
CAPACITIES CREATED BY INSTITUTIONAL DEVELOPMENT

The task of institutional development is one of investment to make current and future productive activity at universities and specialized institutes possible. The final aim of these activities is improvement in public policy in the field of population, a criterion that should guide choices concerning the types of capacity created. Policy at its highest level refers to decisions reached by national governments to adopt a course of action based on identified alternatives. Implementation and revision based upon evaluation are expected to follow. The making of policy extends to the outermost reaches of the public services, including program policies in the field as well as in the national capitals.

When universities set out to make their contribution, they need an interrelated set of capacities to train persons, conduct research, and perform services linked in a chain that assists in the process of policy formulation, implementation, and evaluation. The relationships of this chain are shown on the following chart. Note in particular how the final product depends upon the quality of prior intermediate products. Each of these links in the chain is discussed in more detail below.

Training refers to the process of renewing and expanding the stock of trained persons, and progressively increasing the quality of skills embodied by these persons for the task of contributing to improved policy design. Reference to the chart shows that training contributes to policy design both by the employment of persons in programs where policy is finally made, and by their employment in intermediate activities that will contribute by their outputs to policy.

Research refers to the process of creating new knowledge of general and local relevance. What constitutes research from a local point of view is


Training
Trained persons
Research
Policy-relevant knowledge
Service
Consulta-tion & technical support
Policy making process. Conducted in organized groups, public bodies, and executive agencies at all levels of the society.
Improved population policies
Institutional Development is the creation of sustained capacity to perform activities (boxes) that yield useful intermediate and final outputs (circles)

often rediscovery or redistribution of knowledge already available elsewhere. Local validation and investigations that reformulate knowledge in terms of local conditions are important types of knowledge creation.

Service refers to the process of providing policy-relevant knowledge and technical support to agencies directly involved in policy determination. Included are detailed designs for program implementation, evaluation and feedback. Without the capacity to render service through consultation and technical support, the flow of research results would be confined to an inner circle of persons at the institutions where the research is performed. Service is the communication activity that carries concepts, skills, and proposals to the groups whose duties are policy determination, implementation and evaluation.

Institutional development is cumulative in its results because it allocates resources also to investments rather than simply to current outputs. Some results can be expected within short periods of a year or two, and others only after several years or even decades. Skilled development looks after demands for immediate outputs as well as those that take longer to meet. At each level of the process shown on the chart, goals can be set for short-term as well as long-term products. A balance must be struck among these that discounts the value of those objectives which take a long time to achieve and utilizes resources as far as possible to obtain near-term results. Such an emphasis protects programs from the intrinsic academic bias toward long-term outputs.

GOALS FOR TRAINING

Training in demography and related skills for the field of population is preeminently well performed by universities. Universities provide a clientele of students, an infrastructure of supporting services, and most importantly, a range of knowledge and skills on which a new training program can draw in

designing curricula. In the university students can be trained to respect and exploit the skills developed by social science disciplines, and do so in a setting where each distinctive discipline stands on its own and is represented by experts. Individuals may learn to use the skills of several disciplines in the service of population studies, but as novices students need to be oriented to the framework of particular disciplines rather than be confused by the partial products of disciplines that have lost identity by combination. It is argued here that a major goal of training should be the imparting of a strong disciplinary competence fused with demography as a partner discipline rather than as a self-sufficient alternative.

When the study of demographic processes as related to economic and social systems acquires recognized paradigms and transmittable knowledge that is uniquely organized, it may become possible to have an independent disciplinary basis for training specialists in population. First steps in this direction are seen, for example, in the establishment of departments of demography at the University of Pennsylvania, Catholic University of Louvain and, in the developing world, at the Universities of Indonesia, Tehran, and Zaire. However, it is recognized at each of these places that training beyond a narrow statistical grounding requires cross-disciplinary collaboration in the curriculum in order to meet high level educational standards.

The main issue at universities has been whether to organize training within special population institutes and centers or within the curricula of existing departmental structures. For training that leads to conventional academic degrees there is no avoiding the necessity to mobilize departmental support and to build the demographic teaching skills into existing departmental staffs. A center can provide supplementary infrastructure, especially for training in research skills at the postgraduate level, but cannot carry students

through to degrees on an independent basis. These issues have been discussed in the literature that generally favors close integration with disciplinary departments.[2] The findings of the present survey support this view.

In a few institutions where strong internal leadership and generous funding for teaching staff are available, centers have successfully provided a home base for students, at least during their initial years of existence. Even so, cooperation with university departments has been necessary to give well-rounded programs to students and has probably been a factor in their survival within the university. The Institutes of Population Studies at Haceteppe University in Turkey and Chulalongkorn University in Thailand are examples of strong centers in this pattern. Where greater independence has been attempted, fragility and even failure have followed. Haceteppe and Chulalongkorn, although now both eight years old, have yet to be tested under conditions of minimal external support.

Independently chartered international centers are to some extent an exception located entirely outside the university framework when first established. They undertake training for middle-level technicians for the most part. Significant contributions of this type are being made by the United Nations Cairo Demographic Center (CDC), Centro Latinoamericano de Demografia (CELADE), and Regional Institute for Population Studies in Ghana (RIPS). When these internationally chartered institutions have extended training to the level of postgraduate degrees, they have had to affiliate with national universities (CELADE, RIPS) or try to become small replicas of universities on their own (CDC). Thus, the logic of broad professional training forces the center to seek university resources even when such a setting was not selected at the outset.

---

[2]See: Demeny & Gregg, op. cit.; and Lynton, op. cit.

The function of university centers in relation to training should be to affiliate professors and students in a range of interdisciplinary projects so that they may become, collectively, advocates of faculty appointments and courses in the social sciences that give population prominence. In principle, the center should provide complementary infrastructure rather than full-fledged independent facilities. At some location in the university, strong demography must be placed and utilized across departmental lines, although where it is placed is not important. The possibilities include statistics, economics, sociology, and biostatistics. At the University of Lagos, demography is located in the Economics and Sociology Departments; at Middle East Technical University in Ankara, it is located in the City and Regional Planning Department; at the University of Nairobi, in Sociology and Geography; and at the American University of Beirut, in Public Health. At the University of Minas Gerais in Brazil, the Center for Development and Regional Planning (CEDEPLAR) has taken the initiative of offering courses in demography without the creation of any population infrastructure at all.

During the conduct of country and regional surveys it was consistently observed that the quality of teaching in population studies depends heavily on both the extent and quality of social science development at the university. This suggests that preference be given to locating institutional development efforts at places where the social sciences are strongest. However, special development in the field of population is often needed since the social sciences do not automatically include specialization in that field. Staff and curricula development must include emphases on demography and applications in research that are oriented to population.

The close connections between demography and the social sciences suggest that specialized training in demography alone should be limited to the training

of only the most specialized, usually lower-level, technicians. The best students and the ones upon whom population programs and centers wish to rely for the design and management of policy-oriented studies should be trained in broader programs than demography alone. Social science graduates are excellent candidates for programs that "add on" demography, and the best can be selected at that stage rather than earlier. Institutional development can be accomplished at much lower cost if training capacities in population are positioned adjacent to a central core of social sciences (or possibly statistics or biology) and students are brought into the field with basic skills acquired earlier in a related social science discipline.

From the standpoint of students equipping themselves for professional careers, opportunities for full-time specialization in demography narrowly defined are not numerous. Their prospects are better when they offer their demographic skills in conjunction with broader, and hence more adaptable, background in the social sciences. Such persons increase the likelihood that demographic considerations will be included in policy analysis and application. At the same time personal options to rise to high levels in professional careers are kept open.

Training is not only for specialists and technicians. It should also be aimed at the creation of an educated public that understands and supports public action in the field of population. Experts can do little unless supported by a public that will grant them authority to act. Population training aimed at creating such understanding differs in its pedagogy and content, being less technical and more conceptual and descriptive. The objective is to teach an understanding of essentials rather than to train individuals in expert production of detailed analysis. Wherever institutional development programs are undertaken, major contributions to public understanding can be achieved by including this element in the program design.

GOALS FOR RESEARCH

The goal of better population policy demands research that answers a stream of questions with reasoned arguments and information. A dialogue between policy agencies and researchers is more effective than waiting long periods for comprehensive answers to major questions. The design of research capacity should aim, therefore, at an ability to define study targets in a parsimonious manner and to do so in consultation with the ultimate users of results. The habit should be instilled of asking periodically whether the research question has yet been answered or whether a change of direction is necessary. The purpose of research is to find answers or to move on to where answers may lie. Major findings and their acceptance are usually the product of successful passage through smaller problems, each of which was rewarding on its own.

In order to accomplish this objective, it is often advantageous to create a capacity in the university which is wholly or partially separated from training facilities. Although training, especially at postgraduate levels, includes learning how to do research, teaching of research technique has a different pace and a less product-oriented focus than research to answer practical policy questions. There may be shared office and computing facilities, and even shared data, between the teaching and research enterprises. However, the distinctively different aims of the two should be kept closely in mind. If the university setting is too unresponsive to the need for policy research in its own right, independent institutes are appropriate. Among the earliest independent institutions that undertook population research were the Pakistan Institute of Development Economics and CELADE. Both can attribute some part of their research output to the advantages of being free from formal teaching functions.

Research capacity has distinctively different purposes from those of national statistical systems. When the latter are poor, the temptation to do the job at the research institute may be strong but should be resisted. This admonition is offered because strong tendencies to assume the functions of statistical offices were noted in some universities during the survey, to the detriment of analytical capacity and even to the growth of national statistical services. During the 1970's the flow of data from censuses, fertility surveys, and household sample surveys is expected to be larger by a factor of five or more than it was in the 1960's. Research capacity needs to be positioned where it interacts with, but is not responsible for, these massive observation systems.

Encouragement can be given to a new type of young scholar in the developing countries who has learned how to move between his university and the statistical office in a collaboration that brings forth new information and knowledge on population matters otherwise hidden in unprocessed statistical returns. A major aim of institutional development that can be facilitated by research grants is to create the habit of such collaboration. A network of professional relationships, rather than formal inter-institutional ties, is often a more effective means for exploiting research resources and communicating results.

GOALS FOR TECHNICAL AND CONSULTATIVE SERVICES

Movement of academic people in and out of government service is an effective means for communicating and applying technical skills of university staff in the policy-making area. Professional mobility provides, however, a limited and infrequent means for such communication. A largely unmet challenge is to institutionalize consultative services and technical support for government that will flow continuously into the policy process. The models are refresher workshops and seminars for officials and their professional staffs,

information-gathering projects carried out jointly with them, studies undertaken to meet questions framed by the consumers rather than the producers of knowledge, and the provision of regular consultative services on a paid basis to government.

Institutional investments in staff development, equipment, advisers, and other means for accomplishing training and research objectives already provide a foundation for service activities. International agencies can encourage the development of a service tradition by funding demands for such services (grants to the users which they disburse to the suppliers of service), by sponsoring the employment of professionals in similar types of activity outside their own countries wherever good examples exist, and by rewarding the service emphasis when evaluating the results of institutional development grants.

NATIONAL AND INTERNATIONAL INSTITUTIONS

A strong justification, based on the long-term productivity of resources invested, can probably be made for investing national and international resources primarily in national rather than international institutions. This is due to the greater access to resources and survival capacity of national institutions as well as a conviction that no loss of international exchange is necessarily implied. National institutions can employ expatriate staff, admit foreign students, and draw upon international resources just as effectively as multinational or international training and research institutions where offered the same options. They also can be strengthened against local vicissitudes by having close scientific, professional, and funding relations with external organizations. The choice between funding national and international institutions lies chiefly with the external agencies, so these arguments refer to their policies.

An international character for national institutions can be a goal from the outset of development, encouraged by funding the movement of personnel among developing countries as well as between them and the major centers in developed countries. Diversity of international funding sources for each institution would also encourage the process by favoring diverse nationalities when recruiting staff and advisers. Most leading universities and institutes of the world commit a significant proportion of their resources to keeping in touch with professional and knowledge centers abroad. The same objective should be an aspiration and, as early as possible, a reality in the developing countries.

At early stages of institutional development, national institutions are heavily dependent on the importation of expertise and funding for every aspect of their enterprise. At later stages they can rely upon themselves as far as the basic core of facilities and national staff are concerned. International funding should then be used to pay the difference in cost of foreign as compared with national staff, fellowships for study abroad, and costs of travel and study for brief periods outside their own country for permanent staff. Training, research, and service are activities that conspicuously benefit from an international "trade" in personnel and ideas, and will continue to do so long after the basic institutional capacities have been established. This pattern should be strongly entrenched by the time international assistance is terminated.

THE SIZE OF THE TASK FOR EXTERNAL AGENCIES

A certain arbitrariness is inevitable when trying to indicate the size of the task of institutional development in the developing countries. First of all, whatever is done by resources that come from within or outside the country must complement, not substitute for, whatever exists already. No more should be initiated by external agencies than is sustainable on the basis

of local budgetary support within a reasonable number of years. More development is warranted in those places where the university system is highly developed and capable of providing support. More development is also warranted where there is leadership ready to help the new programs and where there is already a clear demand for outputs that are expected to emit from institutional development. Finally, when international agencies must choose among countries there is more need for capacity where populations are large because there will be more policy bodies, larger action programs, and a greater variety of types of problems to be solved.

In the developing world, one basic institutional capacity for each 20 million of population may be proposed as a realistic national and international goal. That capacity should be of a certain critical minimum size or the investment is likely to be ineffective. Efforts to develop population capacity by such limited actions as an appointment in sociology, or funding of a research project for rural to urban migration in the economics department, are unlikely to result in sustained institutional development. As initiating actions they may have some value, but they must be followed up quickly by coordinated action in several disciplines. Otherwise, the isolated faculty member or research team is likely to become involved in the stream of a discipline's more classical concerns without much impact in the field of population. Individuals acting alone can hardly sustain the multi-facted training, research, and service necessary to deal with the relationship of population to social and economic policy.

The definition of an adequate and sustainable minimum size depends upon the scale of the local university environment (the larger the institution and social science student body, the larger the population input needed) and upon the program objectives themselves. As a very approximate criterion, at least two middle-level or senior staff persons should be wholly committed to

demography or to the demographic aspects of one of the social sciences, and should have in addition the equivalent of four staff positions at varying ranks from several disciplines devoted more than half time to the field. Associated technical and support personnel plus undergraduate and postgraduate clientele would be linked in normal ratios to this minimum of six staff.

Once launched the need to attain a critical minimum size in an institutional development project is reason for concentrating assistance on only as many institutions as can be carried for five to eight years (average duration of external funding requirements) without interruption. In some countries there will be a complicating factor of "double development" when research has to be located in an institution other than the one engaged in training. This is most likely where continental traditions for separating research from training prevail. Rather than attempt both at the same time, it is suggested that international assistance concentrate first on the research institution and follow later with the training institution. The rationale for this strategy is that the research organization's own demands for personnel will make it easier to initiate training in the university at a later stage, and the results of research will create a ready body of locally relevant materials upon which to base training.

The scale of the task of institutional development in the developing countries can be estimated in rough quantitative terms by assuming unified development of training, research, and service in one university per 20 million population, and raising the estimate by one-third to allow for instances of "double development." The optimal sequence of institutions will, of course, favor some earlier than others. For the developing world, this works out to 192 institutional capacities required as of 1975. From the standpoint of actual opportunities for external agencies to assist in institutional development, the number that could be considered is smaller. If China and India are

excluded the number drops to one-half or approximately 96. As time passes the required number will also increase with population growth. Approximately three institutional capacities must be added per year on this account, excluding China and India. Not all can or will be taken up at once, but this is the goal.

Progress toward such a target depends on national commitments of resources even more than upon international commitments. During the last decade and a half, however, the initiative has been largely with the international agencies. Presently, between 30 and 40 institutions, including international training centers, have been brought into institutional development programs on a scale that surpasses or that could possibly reach the critical minimum size referred to earlier if they have not already done so. Few, however, have already attained that scale, and there are bound to be casualties. A list is appended to this chapter which shows institutions where international funding is currently at levels which are expected to exceed (or already has exceeded) $100,000 and where the substantive orientation is demography and related social sciences. Funding of $500,000 to $800,000 over the complete cycle of development is common. A lower threshold is set for the list to include new entrants as well as mature projects.

An estimate of the current flow of external funds into institutional development would be defined ideally to include all costs whether granted directly to the institution or by some service in kind such as staff fellowships, advisers, and materials. An order-of-magnitude estimate of funds flowing from UNFPA, USAID, Ford Foundation, Rockefeller Foundation, and Population Council in 1974, is approximately $3.5 million after eliminating double counting.

For projects currently in progress the average outlay is $100,000 per year. Typically, the external cost is lower in the beginning, rises rapidly as heavy costs of staff training become dominant, and then declines. A commitment of all external agencies combined to institutional development of $5 million

per year would permit externally-assisted development to proceed concurrently in approximately 40 locations (40 X $100,000 = $4 million) and provide an additional sum of $1 million for supporting professional and managerial activities by the external agencies. This latter component is as important as the former. Projects should be closely monitored by experienced professionals who also provide needed advice on substantive, administrative, and financial problems. The host institution is then able to move much more quickly than otherwise into a self-supporting position.

A commitment larger than $5 million per year could be efficiently absorbed, but such a commitment appears unlikely. Indeed, funding trends at the time of writing indicate that levels below the current $3.5 million per year are a distinct possibility in the immediate future. Even at the upper level of $5 million per year, a target of 96 institutions (+ 3 more per year) would not be reached until about the year 2000. This calculation assumes only five years of support per institution and no aborted projects.

NEW INTERNATIONAL STRATEGIES FOR DEVELOPMENT

It would appear, therefore, that there is an acute shortage of foreign funds relative to needs for such assistance to institutional development. The application of sound criteria for choice are particularly necessary in such conditions. The following are proposed:

First, in those countries where "double development" is the pattern (research and training institutions are separated), select one to start and follow with the other at a later date. As argued earlier, preference for installing population first in the research institute rather than the university is usually indicated.

Second, local government and external agencies should take on only as many institutions as they can safely support during a typical sequence of

development. Funding is committed in segments, but unless there is a long-term perspective, the initial grants are wasted by premature termination. Plans should allow for support of only as many places as there will be a possibility to spend $500,000 to $800,000 during not less than five years.

Third, institutions that have strong social science programs should be preferred over those that do not. When funds are scarce, risks should be minimized by concentrating on places where chances of institutional success are greatest. Greater risks can be taken in countries where needs for the outputs of population institutions are especially high, but it would be wasteful to be guided by the "need" criterion alone.

Fourth, the commitments already made by external agencies are responsible for an array of partly completed institutional development projects which can be carried to conclusion less expensively than closing down and starting with new ones. Thus, the future pattern of allocations should be regarded as fixed to a large extent by the past pattern unless, of course, substantial new resources become available, or the particular project does not continue to be productive.

Fifth, weighing of a wide range of local and regional factors should be undertaken on a continuous basis. A contribution toward such evaluation is provided by the regional and country chapters of this report.

Sixth, it would be a most welcome development if larger budgetary commitments by national governments to population were elicited by the current scarcity of international resources. However, this probably will not happen without international assistance aimed precisely at encouraging this shift in support. The time required to achieve self support, for example, probably could be shortened in many projects.

National host institutions should be asked to make regular reviews of plans, funding, personnel, and other matters in cooperation with the

representatives of organizations participating in their development. Once every year there could be a review during which a three to five year plan for the future is elaborated and documented in detail. The principle partner from abroad could assist in the conduct of such reviews, providing an occasion for evaluation and redirection of programs so as to reach goals as rapidly as possible.

RESPONSE OF THE POPULATION COUNCIL

With increased reliance on national resources for institutional development, the international component must become even more selective than in the past and focus on the provision of good models and expert guidance for local programs. The present survey indicates the field of choice open to international funding agencies. It does not attempt to advise particular agencies on how they could best organize and program funds to serve the field. The survey, along with other factors, has prompted self-evaluation by the institution responsible for its execution, the Population Council. It may be of interest briefly to review how the Council is responding to the new situation in the field of institutional development as it concerns demography and related social sciences.

The Council stands between sources and users of funds since it has no endowment of its own. It may advise funding agencies, or even accept funds from them for allocation, but the Council's basic roles are that of advisor and participant in the process of building experience, knowledge, and a fund of expertise that all can draw upon. In institutional development, and particularly in the demography-social science fields, the Council engages in three types of activities. They may be described as: (1) professional partnerships, (2) fund-raising and grant-making activities, and (3) technical support services. These are explained in more detail below.

Professional partnership. This is the most intensive and selective relationship in institutional development. It involves consultation on research and technical matters, assistance in the recruitment of staff for an institution, placement of Population Council staff at the institution for specific periods of time, invitations to staff of the partner institutions to visit and work at the Council, and the undertaking of joint scientific inquiries or technical projects. At this writing, the actual or projected presence of one or more of these program elements is especially important in the Council's relations with the following institutions:

1. Bangladesh Institute of Development Studies, Dacca
2. Institute of Population Studies, Chulalongkorn University, Thailand
3. Institute of Population Studies, Hacettepe University, Turkey
4. Demographic Institute, University of Indonesia
5. Regional Planning and Development Center (CEDEPLAR), Department of Economics, Federal University of Minas Gerais, Brazil
6. Institute of Population and Manpower Studies, University of Ife, Nigeria
7. Bureau of Resource Assessment and Land Use Planning (BRALUP), University of Dar es Salaam
8. Population Studies and Research Center, University of Nairobi

The list reflects current emphases and its composition will, of course, change from time to time. A second tier of associations is also important, but more in relation to the next two Council roles than the first. The upper tier is a reflection in part of a history of past associations, but has been drawn to reflect current needs as well.

Fund-raising and grant-making activities. The Council stands between sources and users of funds since it has no endowment of its own. One of the Council's roles has been to administer funds that are granted to the Council for specific institutions. In this way, the Council serves both grantor and grantee

as an intermediary for program planning and administration. Institutions assisted by this funding service are shown on the list as recipients of USAID funding with the Council as administrator. Among these institutions, the Universities of Ife and Dar es Salaam are in the upper tier of institutions since with these institutions the Council has developed a broadly based partnership. Other USAID-funded institutions belong to the second tier where professional collaboration is less focused on substantive and more on administrative service. Some of these institutions will move into the first tier as their ability to interact internationally in research and training increases.

Technical support services. Most important among these services is administration of staff training programs through a training office in New York. This service is a major element of support for most of the USAID-funded institutions. In addition, technical services include provision of books, equipment, and computer software, and the Council's general information program which comprises publication of periodicals and books. Technical services of the Council are provided to a large number of interested institutions upon demand without limitation to those included in the first two program categories.

In order effectively to perform the roles outlined, the Council has relied in the past on resident advisers posted in selected institutions abroad, supported by periodic consultation from the New York staff. Recent experience and the present survey have demonstrated that there has been a sufficient increase in professional manpower during the last ten years, including trained persons from developing countries, to expect institutions to do more of their own recruiting. Institutional development is currently being managed on the assumption that foreign and local personnel alike will be recruited in the future primarily by the host institution. This policy results in more interchange of personnel among developing countries, earlier replacement of foreign staff by

national staff, and earlier attainment of a full sense of professional equality among institutions.

Overseas demographic staff of the Council are now being posted primarily on a regional rather than institutional basis. The new regional representatives of the program in demography and related social sciences are experienced scientist-advisers. In certain instances, they make regular contributions to one of the institutions on the upper tier of Council partnerships. Their main task, however, is to service the profession and institutions in the region according to the following list:

1. Assist host countries and external supporting organizations to identify needs, assess feasibility of meeting them, and plan programs for the creation of sustainable capacities in training, research, and service oriented to the needs of the policy making process.

2. Assist institutions currently receiving aid with periodic reviews of their overall plans including funding, staff development, and progress toward self-support.

3. Advise upon and contribute to the formulation and implementation of research and curriculum plans, especially at the level of postgraduate training.

4. Assist in the identification and placement of qualified national and expatriate personnel.

5. Promote within-region movement and training of institutional staff.

The regional pattern has been implemented recently in East and Southeast Asia and in East Africa. It will be implemented early as 1975 in West Africa and North Africa, and will be considered in the future for South and West Asia and Latin America to the extent that funding permits. A major objective of this programmatic plan is to place high quality professional

services in the field where they will be exploited flexibly by more than one institution. It is assumed that national institutions can and will continue to develop successfully without resident advisers from the Council on their local staffs, particularly if given encouragement to do so. Certainly some exceptions will be made, and advisers will be posted to specific institutions, but the Council considers the productivity of the new pattern to be higher than the old one given present conditions.

In terms of the three activities of the Council outlined earlier, the first and second are strengthened in the field by the regional office plan. Selective visits aimed at performing some specific research or training function are made by New York staff. Services in Turkey and Chile are provided largely on this pattern. The substance of research projects at institutions and needs for special training seminars or workshops in the field will determine the extent of professional staff participation from New York. The third role, that of technical support, will be conducted as a routine New York-based service.

The Council's plans include components which are unique and others that partake of modes of operation followed by other organizations rendering international assistance. The new pattern for the Council is an evolving one that is capable of undertaking more or less activity depending upon levels of institutional development that donor agencies are prepared to fund.

INSTITUTIONAL DEVELOPMENT PROJECTS IN DEMOGRAPHY AND RELATED SOCIAL SCIENCES RECEIVING EXTERNAL ASSISTANCE IN 1974

Criteria for inclusion in this list: The project must have received, or be programmed to receive, cumulative external funding of $100,000 or more, and have a duration of at least three years.

Country (City)	University or Other Institution [1]	Principal Sources of External Funding	Administrator of External Funds if Different from Source
	Africa Excluding North Africa		
Cameroon (Yaounde)	UN Institute for Demographic Training & Resources (IFORD)	UNFPA	
Ghana (Accra)	UN Regional Inst. for Pop. Studies (RIPS)	UNFPA	
Ghana (Accra)	Univ. of Ghana	Population Council USAID	Univ. of North Carolina
Ghana (Cape Coast)	Univ. of Cape Coast	USAID	Population Council
Kenya (Nairobi)	Univ. of Nairobi	Population Council	
Liberia (Freetown)	Univ. of Liberia	UNFPA	
Nigeria (Ibadan)	Univ. of Ibadan	USAID Ford Foundation Population Council	Population Council
Nigeria (Ife)	Univ. of Ife	USAID Population Council	Population Council
Nigeria (Lagos)	Univ. of Lagos	USAID Population Council	Population Council
Nigeria (Nsukka)	Univ. of Nigeria	USAID	Population Council
Sierra Leone	Fourah Bay College	UNFPA	

[1] See regional and country reports for identification of units receiving assistance within universities or other institutions.

Country (City)	University or Other Institution	Principal Sources of External Funding	Administrator of External Funds if Different from Source
	Africa Excluding North Africa (continued)		
Tanzania (Dar es Salaam)	Univ. of Dar es Salaam	USAID Population Council	Population Council
Zaire (Kinshasa)	Univ. of Zaire	USAID	Population Council
	South and Central America		
Brazil (Belo Horizonte)	Univ. of Minas Gerais	Population Council Ford Foundation	
Chile (Santiago)	Demographic Training & Research Center (CELADE)	UNFPA Ford Foundation	
Colombia (Bogota)	Pontifical Catholic Univ.	USAID	Univ. of North Carolina
Colombia (Bogota)	Regional Population Center	Population Council Ford Foundation	
Costa Rica	CELADE Sub-Center	UNFPA	
Costa Rica	Center for Social and Population Studies (CESPO)	Ford Foundation	
Mexico (Mexico City)	El Colegio de Mexico	Ford Foundation Rockefeller Foundation Population Council	
Peru (Lima)	Pontifical Catholic Univ.	USAID	Population Council
	South and East Asia		
Bangladesh	Bangladesh Inst. of Development Studies	Ford Foundation	
India (Bombay)	International Institute of Population Studies	UNFPA	

Country (City)	University or Other Institution	Principal Sources of External Funding	Administrator of External Funds if Different from Source
	South and East Asia (continued)		
Indonesia (Jakarta)	Univ. of Indonesia	USAID Population Council Ford Foundation UNFPA	Population Council
Korea (Seoul)	Seoul National Univ.	USAID Population Council	Population Council
Korea (Seoul)	Yonsei Univ.	USAID	Population Council
Nepal (Katmandu)	Tribhuvan Univ.	USAID	
Philippines (Manila & Quezon City)	Univ. of Philippines	UNFPA Ford Foundation	
Thailand (Bangkok)	Chulalongkorn Univ.	Population Council	
Thailand (Bangkok)	Mahidol Univ.	USAID Rockefeller Foundation UNFPA	Univ. of North Carolina
	West Asia and North Africa		
Arab Republic of Egypt (Cairo)	Cairo Demographic Center	UNFPA	
Arab Republic of Egypt (Cairo)	American Univ. of Cairo	US (PL480) Ford Foundation	
Iran (Shiraz)	Pahlavi Univ.	USAID UNFPA	Univ. of North Carolina
Lebanon (Beirut)	Lebanese Univ.	UNFPA	
Turkey (Ankara)	Hacettepe Univ.	Ford Foundation	

Chapter 2

REPORT ON INSTITUTIONAL DEVELOPMENT IN DEMOGRAPHY AND RELATED SOCIAL SCIENCES

SUB-SAHARAN AFRICA

This regional overview is intended both to provide a context in which to read the country surveys presented elsewhere in this report and to summarize in convenient fashion the recommendations for institutional development activities that emerge from those surveys. The overview therefore consists of a brief discussion of the African demographic context; a review of official national population policies and some of the obstacles to the formulation and implementation of such policies; a discussion of the current status of teaching and research in demography and related social sciences in the various regions of the continent; a discussion of the two United Nations-supported regional demographic centers in sub-Saharan Africa; and a concise presentation of recommendations for institutional development activities in Africa for the next several years. For purposes of this report, "Africa" consists of sub-Saharan West, East, and Central Africa. Southern Africa is covered only indirectly, owing to the political context prevailing (but rapidly changing) in that part of the continent and to the limited experience of donor agencies, the Population Council in particular, in the countries involved. (Zambia is here considred part of East Africa.)

The Demographic Context

Demographic data for Africa are probably of the poorest quality of any of the world's major regions, but the quality and quantity of the data have improved in recent years and are likely to improve further over time. Twenty-two African countries are presently participating in the United Nations-sponsored African Census Program, fifteen of which have never before held a complete census. The combined population of the twenty-two countries is estimated at 167 million persons, or about 45 percent of the total population of Africa.[1] An

---

1. See the Report on the African Census Program prepared for the second session of the Conference of African Demographers, Addis Ababa, May 6-10, 1974 (UN Doc. E/CN.14/CAD.2/12, April 3, 1974), Annex I, for a list of national censuses taken or planned by ECA members, 1966-1975.

additional sixteen African countries held censuses between 1968 and 1971. Present indications are that at least nine African countries are likely to participate in the World Fertility Survey.

The amount of demographic research and training through national and regional institutions has increased dramatically in the past decade, and a professional association of population specialists, the Population Association of Africa, was formally established in May 1974. But good data resulting from reliable national censuses, sample surveys, and vital registration systems are still years away. As Caldwell warns, "Twenty years ago we knew almost nothing about fertility levels and trends in tropical Africa and were aware of our ignorance. Today we know a great deal more, but may be more deluded about how much we know."[2] The following paragraphs are therefore subject to caveats of possible inaccuracy and inadequacy, but are based on the best data currently available.

The total population of sub-Saharan Africa was estimated in mid-1973 at 279 million people (the continent excluding Algeria, Egypt, Libya, Morocco, Sudan, and Tunisia, but including Madagascar). Countries range in size from Nigeria, with perhaps sixty-five to seventy-five million people,[3] down to several with about 300,000 people. Population densities for the continent vary greatly, from vast low-density areas to others with well over 400 people per square kilometer on the best agricultural land. The existence of low-density areas is misleading in terms of absorptive capcity, however, as much of Africa is covered with agriculturally marginal soil and other areas have low carrying

---

2. John C. Caldwell, "The Study of Fertility and Fertility Change in Tropical Africa," World Fertility Survey Occasional Papers, No. 7, May 1974, p. 3.

3. The 1973 national census, released in May 1974, reported a total population of 79.76 million people, but this is widely held to be a vast overcount, with some state increases over the 1963 count reaching as high as 88, 93, or 97 per cent.

capacities because of the scarcity of water, climatic conditions, or other adverse environmental conditions. Some low-density areas reflect the effects of the slave trade and others the influence of colonial economies in which the location of roads, railways, and cities influenced subsequent population distributions.

There are zones of relatively high density found in the region extending from Senegal to Nigeria. One high-density zone is found along the coast from southern Ghana through southern Nigeria, extending inland about 150 to 200 miles. A second high-density zone is found in the general region around Lake Victoria, the mountains of Rwanda and Burundi, and down into Malawi. The Ethiopian plateau, parts of the Kenyan highlands, and the slopes of Mt. Kilamanjaro are also high-density areas.

Distinctly lower population densities are found in Somalia, parts of Ethiopia, and northeastern Kenya. Another low-density zone runs from Namibia through Botswana and up into western Zambia and southern Zaire. The low-density belt of Middle Africa runs through the coastal areas of Gabon and the Congo up into eastern Cameroon and the Central African Republic. The Sahelian zones of Mauritania, Chad, Niger, and Mali are also thinly populated in terms of absolute numbers, but clearly not in terms of ecological balance.

Fertility rates in sub-Saharan Africa are among the highest in the world, with crude birth rates typically ranging from 45 to 50. In some countries the birth rate is estimated to be even higher than 50. Crude birth rates in both Latin America and Asia tend to be lower, averaging 38 in Latin America and 32-44 in Asia (1965-71).[4] There are a few countries in those regions with CBR's approaching 50, but these are becoming exceptions. Moreover, the potential for future growth in Africa is much greater, since average mortality levels are higher

---

4. Dorothy Nortman, "Population and Family Planning Programs: A Factbook," Reports on Population/Family Planning, no. 2 (5th ed.), September 1973, Table 1, p. 19; see also Table 1 of this report.

than in any other continent.

Fertility tends to be highest in west Africa, somewhat lower along the east Africa coast, and drops further in a low-fertility belt covering parts of Gabon, Cameroon, Congo, Zaire, and southwest Sudan. The factors behind these differentials are only generally understood, involving health, cultural, and social variables. On the other hand, it is quite clear that modern methods of deliberate contraceptive practice have not had a noticeable demographic impact as yet.

Caldwell estimates that in 1970, "in all of West and Middle Africa, a regionalwith around 140 million inhabitants of whom perhaps 25 million are women of reproductive age currently in conjugal unions, 271 thousand or 1.1 percent had ever used modern contraceptives and 125 thousand or 0.5 percent were currently doing so."[5] Most of the acceptors were to be found in the coastal urban centers of Anglophone Africa. All available evidence suggests that consciously motivated fertility control has not yet reached very far into rural Africa. By 1980, Caldwell estimates that the percentage of contraceptors in west and middle Africa will increase to 1.6 percent of all potentially reproductive women "if there is no further governmental interference in the field," to 3.1 percent if governmental family programs continue to expand at the rate of the past decade, and to 4.7 percent "if crash programmes or programmes of the Korean intensity become common."[6]

KAP surveys taken in several sub-Saharan African countries over the past decade, while subject to a variety of methodological and other criticisms, reveal that when asked what they consider to be an ideal number of children, both

---

5. Caldwell, op. cit., p. 9.

6. Ibid., p. 10.

men and women respond with numbers that are on the average higher than elsewhere in the world.[7] In both rural and urban populations, stated ideal family size usually exceeds six. On the other hand, a growing minority among the urban populations state that they want no more children than they presently have. "Few tropical Africans want smaller families than four children, but the proportion of parents wishing to stop at four is now probably over a quarter in many of the larger cities and usually exceeds a third among the elites found there."[8]

There is little reliable evidence of downward movement in fertility at the national level in any sub-Saharan African country. On the other hand, there is fragmentary evidence to suggest that under some circumstances, usually related to improved health conditions, more productive agricultural techniques, or improved living conditions related to urbanization, there have been slight rises in fertility within countries. Henin, for example, has shown that the change to more productive agricultural techniques (from nomadism to rain cultivation or irrigation) is associated with a rise in fertility.[9]

Mortality rates in Africa are among the highest in the world. Crude death rates for the region in the 1965-71 period averaged 21 per 1,000, while crude death rates during the same period for Latin America averaged 10 per 1,000 and for Asia ranged between 14 and 17 per 1,000.[10] Infant mortality

---

7. For a summary of African KAP findings, see Caldwell, "The Control of Family Size in Tropical Africa," Demography, Vol. V (1968), pp. 598-619; and "Fertility Control" in Population Growth and Socio-Economic Change in West Africa (Columbia University Press, in press).

8. Caldwell, "Study of Fertility," op. cit., p. 7.

9. R. Henin, "Fertility Differentials in the Sudan," Population Studies, Vol. 22 (March 1968), and "The Patterns and Causes of Fertility Differentials in the Sudan, "Population Studies, Vol. 23 (July 1969).

10. Nortman, op. cit.; also Table 1.

rates in Africa frequently rise above 150 per 1,000 live births. Only four of the Asian countries listed on the Population Reference Bureau's 1973 World Population Sheet had an infant mortality rate above 120; four of the Latin American countries had rates above 70, and typically much lower.

If the available data on fertility in Africa are poor, the data on mortality levels and trends are even poorer, especially for infants and children. There is indirect evidence, however, of a decline in crude death rates in recent years, including prevailing rates of natural increase of 2.5 percent to 3.4 percent per year. That is, these rates of increase could not have prevailed over a long period of time. On the other hand, there is no evidence that there has been a significant overall rise in fertility. The prevailing high rates of population growth throughout Africa must therefore reflect declining mortality.

The gap between Africa and the rest of the world is still great, however. Expectation of life at birth is on the average only 46 years in sub-Saharan Africa (see Table 2) compared to 72 in Europe, 62 in Latin America, and 52-55 in Asia.[11] African health services are among the poorest in the world, with the ratios of physicians to population as high as 1:92,000 in Upper Volta, 1:72,000 in Ethiopia, and 1:21,000 in Nigeria (Table2). These ratios are further distorted by the extreme concentration of medical personnel in towns and cities. The overall physician-population ratio in Kenya is about 1:8,000, but it has been estimated that the effective ratio in some rural areas is 1:67,000.[12] Progress is being made in the eradication of disease and the expansion and improvement of rural health services, however slowly. It is virtually certain that mortality will decline further. The most likely consequence of this decline, in conjunction with still high fertility rates, will be high and even rising rates of population growth in most African countries.

---

11. Nortman, ibid.

12. Donald F. Heisel, "View of Population in Africa," manuscript. Parts of the preceeding discussion are based on this manuscript.

An important result of the high and generally steady levels of fertility in sub-Saharan Africa is that the populations are young. The percentage of the population under age 15 is almost everywhere in the 40's. (The data in Table 2 combine the age groups 1-14 and 67+ under the term "dependent population." However, the latter percentage is said to be higher than 3 percent only in Sierra Leone (5 percent), Gabon (7 percent), Lesotho (5 percent), and Namibia (5 percent) African societies are thus characterized by high youth dependency ratios. They also have a tremendous growth potential. The parents of the next generation are already born and are very numerous. Even if fertility rates were to decline substantially and immediately, the number of births would remain high simply because the quantity of potential parents is so great. Most African countries are likely to double their present population in just over twenty-five years. If improved social, economic, and health measures further reduce mortality (likely) and slightly increase fertility (possible), doubling times will be even shorter.

A particular problem facing most African societies results from rates of urban growth even higher than overall rates of population increase. Africa is currently one of the least urbanized regions of the world, but its major cities are typically growing at 5-7 percent per year, or two or more times the national rates of population increase. Urban population growth results from both natural increase and, more importantly, high and increasing levels of rural-to-urban migration. At least partly as a consequence of these demographic features, African cities are characterized by high levels of unemployment, inadequate housing, and vastly strained systems of social services. The long-range potential for social unrest generated by these conditions is a source of concern to at least some African governments.

National Population Policies

As of 1974, only four sub-Saharan African governments had offical policies

specifically intended to reduce the rates of population growth in their countries. Twelve gave official support to family planning activities for other than demographic reasons (e.g.,maternal or child health, individual rights of choice), but twenty-five had no official policies. This latter group is a residual category that includes both pronatalist countries such as Ivory Coast, Cameroon, Gabon, Malawi, and Ethiopiaand countries with unofficial policies supportive of family planning such as Sierra Leone and Zambia. Official country positions are summarized in Table 3.

Perhaps the most important factor in distinguishing those African countries with official policies in support of family planning activities or reduced population growth rates from the others is a country's colonial legacy. In contemporary terms, the main split is between French, Spanish, or Portuguese-speaking countries on the one hand and English-speaking countries on the other, as shown in Table 4. By 1974, every African country that had been British ruled, with the exception of Malawi, had a family planning association that was at least tolerated by the government, four had explicit population policies favoring reduced growth, and another eight supported family planning for other than demographic reasons. In addition, there was an association in English-speaking Ethiopia, and Liberia has recently endorsed family planning activities. In contrast, of the twenty-two French, Portuguese, or Spanish-speaking countries in sub-Saharan Africa, only three had official policies favoring family planning for other than demographic reasons, and family planning associations existed in only two (one had earlier existed briefly in Senegal).[13] In percentage terms, 86 percent of the French, Portuguese, and Spanish-speaking African countries

13. There is, however, a stronger tradition of private special-interest associations in the former British countries than in the French or Portuguese. Thus it is also possible to find more private associations concerned with other matters in English-speaking than in French-speaking countires.

fall into policy category "C" (see Table 3, notes) while only 33 percent of the Anglophone countries do not have explicit policies favoring reduced population growth rates of family planning. (One of the "C" countries classified as Anglophone for this purpose, Somalia, had not been a British colony. Two others have unofficial policies supportive of family planning.)

These classifications do not necessarily reflect practical reality, however. The mere existence of a formal policy statement does not necessarily imply the existence of the administrative or medical machinery, personnel, funds, or commitment necessary for the implementation of policy. Policies that call for the inclusion of family planning services into already overburdened medical facilities usually mean that family planning must compete with the provision of basic medical services for scarce personnel, time, and money. Especially in rural areas, where most Africans live and where health care is at best rudimentary, the competition favors the provision of basic services. Even in urban areas, a frequently cited explanation for high contraceptive "dropout" rates is the poor service available at clinics, the long waits, and the brusque treatment suffered while overburdened medical staff attempt to deal with others who have "more important problems."

Ghana and Kenya are the two black African countries with explicit population policies intended to reduce population growth rates. According to 1972 data, Ghanaian medical personnel and facilities specifically allocated to family planning services consisted of only forty-one nurses, fifty-one auxiliaries, sixty-four field workers, and 140 clinics for a population of approximately 9.3 million.[14] The situation in Kenya, with a population of approximately 12 million, was not much better: sixty physicians trained in family planning by 1970, thirty

---

14. Nortman, Factbook, op. cit., Table 7, p. 45. The table also states that "many government and private doctors participate on a part-time basis."

nurses and midwives, and 250 registered clinics.[15] Fewer than a dozen clinics offer family planning on a regular full-time basis; most offer family planning services only once a month. In citing these statistics, it must be remembered that the current medical infrastructures in Kenya and Ghana are among the best in Africa, and their population policies the most explicit.

Within African governments, as elsewhere, ministries of health are usually much less influential than ministries of foreign affairs, finance and planning, labor, or even education, and are consequently less able to compete successfully for funds or personnel. The vast majority of Africans live in rural areas, yet most African doctors prefer, for a variety of obvious reasons, to live and practice in cities. Trained in the British or French traditions, the African medical profession is as conservative as the European or American with respect to the use of paramedical personnel to provide basic medical or family planning services in rural areas. With few exceptions, the Chinese model of the "barefoot doctor" is not yet acceptable to the medical profession in most African countries.

Other obstacles to the formulation and effective implementation of population policies in Africa include the existence of high-fertility cultural values, the assumption that there are immense economic resources in Africa able to support significantly larger populations, the assumed relationship between large populations and national political and economic power, fears and suspicions about the motivations of donor agencies supporting family planning, and perhaps most important, the absence of reliable demographic data and analyses of the interrelationships between population growth and national development goals.

The KAP studies referred to previously generally concluded that African

---

15. Ibid., p. 47. A five-year plan to expand the Kenya National Family Planning Program, funded in part through a World Bank loan and contributions by other donor agencies, is described in the Kenya country report.

respondents by and large seek larger families than respondents anywhere else in the world. To a great extent, the desire for large families, and particularly for sons, reflects the general awareness of high rates of infant and child mortality and the desire to have at least one son survive to adulthood so as to be able to support aged parents in the absence of other forms of social security.[16] Until such time as declining infant mortality rates become an acknowledged reality in African societies, couples will continue to "insure" themselves as best they can against the economic uncertainties of old age. Related to this argument is the role of the extended family, in which support of children may be spread among several adults, and in which limiting the number of one's descendants does not usually reduce the number of one's dependents. Indeed, the number may be increased on the principle that the man with fewer nuclear responsibilities has a greater ability to take on those of his relatives. Under these circumstances, there is little to be gained by having fewer children.

At the national level, African governments frequently declare that population densities in their countries are far below densities found in many European or Asian countries and note the availability of large areas of unoccupied land is of marginal agricultural quality or environmentally unsuitable for large-scale habitation seems to be a less persuasive argument than the assumed relationship between large populations and national political and economic power. Another commonly heard argument is that family planning or fertility control, supported by "white" developed countries, is either a poorly disguised attempt to limit the nonwhite populations of the world ("neo-genocide") or an excuse to limit economic assistance and keep Africa in a state of poverty and

---

16. In parts of West Africa, where women have traditionally played major roles in the market economy, daughters are equally welcome as guarantors of old-age security.

vulnerability to continued exploitation ("neo-imperialism"). To the extent that donor agencies are providing more funds for family planning and fertility reduction at a time when bilateral economic development aid is declining, African suspicions about donor agency motivations are increased.

Those who argue for specialized family planning programs as a useful adjunct to economic development efforts have as yet no successful examples to point out in Africa. Asian experiences are often dismissed by Africans as inapplicable to Africa, and insistence by donor agencies on the relevance of those experiences simply exposes the agencies to charges of cultural insensitivity and lack of knowledge about African cultures and conditions.

In the long run, effective population policies in Africa will only emerge from better demographic data, well analyzed by local scholars and experts and perceived by African policy-makers and administrators to be relevant to national development goals. In particular, better information is needed about the following:[17]

1. Basic demographic data on the size, rates of growth, and distribution of national populations. Without such data, economic planning cannot proceed on a rational basis, and arguments about the over or under population of Africa lack firm grounding in empirical evidence convincing to African policy-makers. There is a pressing need for national censuses and sample surveys for planning purposes.

2. The economic effects of fertility decline. More information is needed on the relationships between population change and economic development, and for closer examination of the Coale-Hoover arguments in the African context.

---

17. Cf. Caldwell, "Study of Fertility and Fertility Change in Tropical Africa," op. cit., esp. pp. 11-15.

It is clear that expanding school-age populations increase the difficulties of introducing universal education. It is also clear that expenditures on housing, schools, and various urban services, could be used instead for capital investments. "But it is less certain what ... population growth means for rural investment and production, especially in the subsistence sector."[18]

Africans often point out that fertility decline in Europe was associated with economic growth and argue that such growth will "naturally" result in reduced fertility. But African population growth rates are far higher than any found in the European past, and it is highly unlikely that current or anticipated rates of economic growth in Africa can surpass or even match the impact of sustained birth rates of 50 per 1,000 and growth rates around 3 percent per year.

3. Information on the economic and social forces at the level of individual families sustaining high fertility, and espcially the impact of social change on individual fertility. Research currently underway in Tanzania (the National Demographic Survey and a study of rural development and demographic change at the household level) and elsewhere in Africa (the Changing African Family project) are important but only first steps in the direction of providing such information.

4. Mortality patterns, trends, and implications, especially among infants and children. African mortality rates are among the highest in the world, have probably been falling in recent years, and can certainly fall much farther. Until the trends are clarified, however, and until fertility behavior begins to reflect a general awareness that children are more likely than before to survive to adulthood, policy-makers and the general public alike will resist the idea of having fewer children. In the meantime, constant high fertility rates and dropping mortality will mean even higher rates of natural increase over

---

18. Caldwell, Population Growth and Socio-Economic Change in West Africa, op. cit., p. 5 (French edition).

the next few decades.

5. The reality and cause of low fertility, especially in Middle Africa. Family planning is not likely to achieve popularity in Gabon, for example, where it has been estimated that the proportion of women who have never had a child by the close of the child-bearing ages may reach as high as 30 percent. The percentage is probably lower elsewhere, but observers must remember that infertility is also perceived as a population problem in Africa.

6. Current levels of antinatal practice and its acceptability among various sectors of African populations. In particular, attention needs to be given to traditional methods and practices of contraception, their effectiveness, and their applicability in contemporary times. The Changing African Family project is the first large-scale effort in this direction.

In terms of effective impact on the formulation of national population policies in Africa, the research priorities outlined above must be undertaken, analyzed, and persuasively argued by African scholars and government officials. Although external agencies have and for some time to come will assist in the encouragement and formulation of such policies by identifying national scholars, planners, and administrators with appropriate interests, and by limited provision of financial, technical, and professional support, the sustained encouragement, promulgation, and implementation of national population policies in Africa must rest on local funding and trained and committed African personnel. It is in this context that institutional development, defined as the development of local capacities to undertake research, training, and persuasive presentation of evidence, should proceed.

Teaching and Research in Demography and Related Social Sciences (DARSS) in Africa

As recently as 1970, a survey undertaken by the Population Council revealed only four universities in Africa (out of forty-two surveyed on the continent, excluding Egypt) that offered three or more courses in demography. The situation

has changed greatly in the intervening four years. There are now major programs in demography and related social sciences (hereafter referred to as DARSS) at the University of Ghana, the University of Nairobi, the universities of Ife, Ibadan, Lagos, and Nigeria, the University of Dar es Salaam, and the National University of Zaire. Demography units have been established within regular academic departments at the University of Liberia and the University of Sierra Leone (Fourah Bay), and DARSS courses are available at other universities in Ethiopia, Ivory Coast, Rwanda, Senegal, Uganda, and Zambia. In addition to university-based DARSS, significant demographic research and in some cases training is underway in governmental agencies in Senegal and Upper Volta, reflecting the French tradition of demographic research and training as a nonuniversity activity. The current status of DARSS teaching and research in Africa is summarized in Table 5. Both university-based and governmental DARSS activities are described in detail in the country surveys presented elsewhere in this report.

There are important distinctions between sub-Saharan Anglophone and Francophone Africa with respect to teaching and research in demography and related social sciences. DARSS activities in Anglophone Africa are increasingly becoming part of regular university programs. In contrast, there has been a remarkable lack of DARSS development in French-speaking West Africa. The reasons are primarily three: the legacy of French scientific involvement in its sub-Saharan West African colonies, hazards encountered or anticipated by Anglophone donor agencies, and problems of small size, poverty, and individualism among the countries involved.

With aspect to demographic teaching and research, the countries of Francophone West Africa have shared a common history. Whether one examines the reasons why no university teaches demography as a major topic or why none of these countries, except Togo, has ever had a full census, the answer lies in the legacy of French tradition. Despite a decade or more of independence, the great cultural divide institutedby the colonial government remains as strong as ever.

DARSS development was hindered by two French colonial policies. First, it was decided that full censuses under local conditions were both impractical and an uneconomic utilization of scarce resources. A series of sample surveys was undertaken instead, resulting in the collection published as Afrique Noire, Madagascar, Comores ... Demographie Comparee. Second, although a small number of Africans were sent to France for advanced training, demographic research in Francophone West Africa was, and largely remains, a French preserve. Thus, in the twenty-one national and regional inquiries that comprise Demographie Comparee, not one African was employed in anything other than a subordinate capacity. Although the quality of the research produced was high, the irreplaceable opportunity for training represented by this vast program of research was lost. Black Africa in fact gained very little from these surveys which represented a total of nearly 1.5 million respondents within the area over a decade. The questionnaires were taken back to Paris for analysis, and because the results were published in a limited edition there, little was ever heard of them again in Africa. As late as 1970, the French carried out a demographic survey of Rwanda, without employing a single Rwandan in an executive position and leaving in the country no more than six copies of the report. Excellent demographic research in black Africa is still carried out by ORSTOM (Office de la Recherche Scientifique et Technique Outre-Mer), but largely by Frenchmen living in diplomatic enclaves, with few or no African colleagues, on topics determined in advance in France. (One exception is ORSTOM participation in a four-nation research project sponsored by the Canadian International Development Research Center in Cameroon, Gabon, Central African Republic, and Congo.)

The universities of Francophone West Africa also relfect another French tradition. "'Demography, an untamed subject without students or teachers, has long been neglected in universities.' This situation, which is common throughout the world, also prevails in French-speaking Africa, where the educational

system is largely a legacy of the French system. . . . Demographic training and research have therefore developed outside the university system through national, foreign, and international agencies."[19]

External agencies that would normally be expected to help in the development of DARSS in developing countries have been very slow in approaching Francophone black Africa. American foundation and university staff most often do not speak French, and few of the Africans speak English. Neither side understands the educational system of the other. Perhaps more important have been the intangible and often unreal barriers created by false expectations. Francophones believe that the funding agencies, which are largely American, are not interested in educating those who do not speak English, and they are probably correct in thinking that the agencies are reluctant to give grants for study in France. On the other hand the agencies have believed, quite wrongly, that these areas are peculiarly unpropitious for DARSS development because the nationals are opposed to all forms of demographic endeavor.

Demographic research in Francophone Africa is hampered by a lack of trained personnel. In addition, there is a fundamental difference in orientation toward research between Francophone and Anglophone black Africa. The latter orientation is much closer to the British and American model, in which basic research is an acknowledged part of scholarly activities within the university, and publications are a measure of individual productivity and an important factor in one's eventual status. Similar pressures to publish research findings do not exist in Francophone Africa. Moreover, since research is more usually the

---

19. "Aspects of Demographic Training and Research in French-speaking Africa and Madagascar," United Nations Document E/CN.14/POP 89, 14 July 1973, prepared for the ECA Seminar on Techniques of Evaluation of Basic Demographic Data, Accra, July 16-28, 1973, p. 1.

responsibility of government statistical bureaus than of universities, the nature of the research is also different. There is a much greater emphasis on demographic research that is directly related to national planning purposes: censuses, migration studies, population projections, and specific projects on the impact of population change on economic development goals. Less concern is expressed for methodological refinement of research techniques chan for the collection of basic data providing demographic parameters usable for planning purposes. Similarly, Francophone Africans tend to be less interested in research focused on family planning and limiting fertility than on the relationship between population dynamics, resources, and economic growth.

Demographic research in Francophone Africa is conducted primarily within governmental statistical or planning offices. The first priority of those offices is a national census or at least regional censuses, rather than more academic research. Even if interest in such research existed, trained staff capable of superivisng both census operations and basic research projects simply do not exist. Data from the 1970-71 National Demographic Survey in Senegal, for example, have still not been analyzed for lack of trained staff. Other examples abound.

The Bulletin de Liaison of the INED-INSEE-ORSTOM-SEAE[20] African demography group reported a total of sixty-nine persons known (to them) to be working on demographic matters in Francophone West and Central Africa as of April 1974. Of these, twenty-nine were African and forty were primarily European and primarily French. Five of the Africans were employed by international agencies (OCAM, IFORD, and ECA).[21] Of the remaining twenty-four, nineteen, were employed

---

20. INED=Institut National D'Etudes Demographiques; INSEE=Institut National de la Statistique et des Etudes Economiques; ORSTOM=Office de la Recherche Scientifique et Technique Outre-Mer; SEAE=Secretariat D'Etat aux Affaires Etrangers.

21. OCAM=Communal Organization of Africa and Malagasy Republic; IFORD=U.N. Institute for Training and Research in Demography (Yaounde); ECA=Economic Commission for Africa.

by government statistical or census offices, four by semiautonomous research bureaus (CVRS, CEPAS)[22] and only one in a university. Most of the Africans were trained in statistics rather than demography. The list is admittedly incomplete, particularly for the universities, but is is doubtful that a significantly longer list could be constructed.

Persons Known to be Working in Demography in Francophone West and Central Africa[23]

Country	Total	African	Other
Burundi	1	0	1
Cameroon	8	6	2
Central African Rep.	2	0	2
Chad	3	2	1
Congo	3	1	2
Dahomey	2	1	1
Gabon	3	1	2
Ivory Coast	7	2	5
Mali	2	1	1
Mauritania	2	0	2
Niger	1	0	1
Rwanda	1	1	0
Senegal	6	2	4
Togo	2	1	1
Upper Volta	7	3	4
Zaire	6	3	3
	56	24	32

Organization	Total	African	Other
OCAM	1	1	0
IFORD	5	1	4
UDEAC	2	0	2
ECA	5	3	2
	13	5	8
GRAND TOTALS	69	29	40

The Francophone countries of West Africa are generally notable for their small populations, their poverty, and their individualism. These constitute real problems in the development of DARSS. The rational solution would

22. CVRS=Centre Voltaique de la Recherche Scientifique (Upper Volta); CEPAS=Centre d'Etudes pour l'Action Sociale (Zaire).

23. Bulletin de Liaison, No. 11, January 1974 and No. 12, April-June 1974.

be regional DARSS institutions, were these acceptable. However, as the fragmentation of the originally unified universities for Togo-Dahomey and Niger-Upper Volta has shown, such institutions are not, except in unusual circumstances, acceptable. Research gains from not being unduly centralized and covering a wide variety of areas, so long as an overall plan can be maintained. If teaching of a sufficiently high quality is provided in one place and sufficient access is given to it, it will eventually attract students from other countries; even as Paris does now, so could Abidjan or Dakar do in the future.

In terms of cooperative research, some projects are underway or planned among the Francophone black African states. Cameroon, Central African Republic, Chad, Congo, Dahomey, Ivory Coast, Mali, Mauritania, Niger, Senegal, and Upper Volta plan to conduct national censuses in 1974-75 as part of the African Census Program, although all face difficultires stemming from the lack of trained personnel to plan and supervise the field work and to analyze the data. Although this is not, strictly speaking, a cooperative venture among the countries involved, a common core of questions is intended.

Two regional research projects have recently been funded by the Canadian International Development Research Center (IDRC). A joint IDRC-OCAM project undertook, with the assistance of an ORSTOM mission, to identify obstacles to the efficient collection of data on vital events (limited in the study to births, deaths, and marriages) in the thirteen OCAM member states.[24] The study focused on popular perceptions of the purposes of civil registration in each of the countries and the possibility of creating new organizational structures (such as mobile registration teams), and it compared the organization and procedures employed in some relatively strong and some relatively weak registration zones. It was published in May 1974

---

24. Malagasy Republic, Mauritius, Rwanda, Gabon, Cameroon, Central African Republic, Chad, Niger, Dahomey, Togo, Ivory Coast, Upper Volta, and Senegal.

as La Situation de L'Etat Civil Dans les Pays de L'Ocam.

The second project is a joint IDRC-ORSTOM-UDEAC pilot project consisting of a series of multiround sample surveys to collect data on population dynamics in rural areas of Cameroon, Gabon, Central African Republic, and Congo. The project is intended as a prelude to a rural observation-registration scheme in each country, to collect data on a continuing basis for rural development planning. An application for funding will be submitted to UNFPA to support the scheme. The pilot surveys have been completed in Congo (two rounds, 10,000 sample), partially completed in Gabon (three rounds, two more to be undertaken, 10,000 sample), half-completed but stalled in Cameroon (two rounds intended, 25,000 sample), and barely begun in the Central African Republic (three rounds intended, 15,000 sample) because of lack of funds and personnel. The Regional Technical Bureau of UDEAC plans to synthesize the results of the pilot surveys to compare the results with data collected by other methods in Morocco (combination of surveys and civil registration), Senegal (multiround sample surveys), and Zaire (single-round survey with retrospective questions).

In terms of future possibilities, international donor agencies should have more French-speaking staff who understand the French educational system and the present role of demographic research in Francophone black Africa. Demographic research focused primarily on the study of fertility is not likely to be greeted enthusiastically. Of much greater interest are studies of the relationships between population change and economic development. In the immediate future, special attention must be given to developing skills and organizational capacities to collect and analyze basic demographic data. Failure to help increase opportunities for demographic training and research, defined in terms acceptable and relevant to Francophone Africans, lends credence to the claims made by a small number of Francophone extremists that Anglophone demography is merely the propaganda wing of the neo-imperialist movement to limit the nonwhite populations of the world.

United Nations Regional Training Centers

The Regional Institute for Population Studies (RIPS) is jointly sponsored by the United Nations and the government of Ghana. RIPS offers a one-year diploma in population studies and a master's degree (actually a degree of the University of Ghana) after a second year of study. The agreement between the United Nations and the government of Ghana calls for the United Nations to provide twenty-five fellowships per year and five full-time faculty. The government, in addition to providng space on the university campus, is to provide two full-time faculty. The University of Ghana also supervises the academic training and awards its own master's degrees to successful candidates after the second year of study.

The Institut de Formation et de Recherche Demographique (IFORD) in Yaounde became operational in November 1972. It offers a basic two-year diploma course, followed by a third year of specialized training. IFORD is not formally affiliated with a university and therefore does not offer a recognized academic degree.

The teaching programs of these centers are broadly similar, with training in substantive and technical demography, mathematics, statistics, sampling, survey and research methodology, and some exposure to sociology, economics, planning and so on. The program at IFORD, however, places more emphasis on formal demography and mathematics than the program at RIPS. The following table presents information on the numbers of students enrolled in the RIPS and IFORD programs since their inception, along with their subsequent progress.

Regional Institute for Population Studies, Ghana

Academic Year	Fellowships Available	Entered Diploma Course	Received Diploma	Entered Master's Program	Received Master's Degree
1971-72	25	8	6		
1972-73	25	16	14	4	3
1973-74	25	14		5	
		38	20	9	3

Institut de Formation et de Recherche Demographique, Cameroon

Year Beginning	Fellowships Available	Entered Diploma Course	Received Diploma	Entered Specialized Course
1972 (Nov.)	25	10	(still in progress)	

... regional centers were originally premised on the need for regional facilities to provide interim training and technical assistance to African governments until national institutions would be established, staffed, and fully operative. Since the Cairo Demographic Center was established in 1963, several national universities and demographic training programs have emerged in Africa, as summarized in Table 5 and described in the country reports. The UN believes the regional centers still have an important role in supplementing the efforts of those national institutions, by stimulating intraregional cooperation in research and providing specialized training at various levels to staff of governmental agencies. Additional persons with demographic training are needed in Africa, but it is also clear that RIPS and IFORD have had serious problems that impair their potential value in providing personnel. Among these problems are the following:

1. Shortage of staff. Under its agreement with the government of Ghana, the UN was to provide five full-time staff for RIPS, and the government was to provide two. The UN actually provided a director and two lecturers, while the government provided only one full-time lecturer. Regular University of Ghana staff and some visiting lecturers have provided some part-time assistance. One important factor behind the shortage of Ghanaian counterpart staff is the difference between the international civil servant salaries paid to the United Nations-supported staff at RIPS and the salaries paid to University of Ghana faculty. The difference is great enough to have caused instances of friction between the two staffs and to act as a disincentive to university faculty who, under these circumstances, prefer to teach and advance their careers within the regular university structure.

IFORD has an acting director (a French demographer) and four other staff members.

2. Number and quality of students. While a total of 100 fellowships have been available for the three classes at RIPS and the one at IFORD, only fifty-five were utilized. (Two of the five M.A. students in 1973-74 held fellowships provided by the Population Dynamics Program of the University of Ghana.) Two out of eight students failed to obtain diplomas in the first RIPS class, and two of sixteen failed in the second. Only four of eight and three of sixteen in the first and second classes respectively were able to proceed to the master's program. The low number of students at the centers is partly a result of administrative difficulties within the Economic Commission for Africa and partly a result of the fact that some African governments are not convinced of the need for demographers. Moreover, the number of university graduates in most African countries is low in relation to the demand, and they are quickly absorbed into a full range of government ministries and agencies, which are often reluctant to release junior staff for further training owing to pressing immediate needs. Neither RIPS nor IFORD is fully established as yet and the quality of their training is uncertain, although somewhat better at RIPS. Consequently, the better-qualified candidates for advanced training are more likely to choose to go to established and reputable universities or demographic training programs in Africa, Europe, or the United States, if at all possible, than to RIPS or IFORD. The result is that the candidates reaching the centers are, more often than desirable, those who have not been able to compete successfully either for postgraduate training in national centers (e.g., Ibadan, Ife, Accra, Dar es Salaam) or for fellowships at the disposal of government departments or ministries for training abroad. As part of the UN system, the centers are reluctant to reject students nominated by governments, but the quality of training has thereby suffered. At

IFORD in particular, the two-year basic program is intended in part to compensate for weak prior training in mathematics. However, the heavy emphasis on formal demography and the absence of field research experience may be equally counterproductive. A preprogram remedial course in mathematics and statistics, of perhaps six to nine months, would be preferable to requiring two years to obtain the diploma regardless of prior training. Graduates of the National Institute of Statistics and Applied Economics (INSEA) in Morocco, for example, should be able to complete the diploma in one year.

3. Absence of research programs. Neither RIPS nor IFORD has developed a research program. Students working on master's degrees at RIPS tend to rely heavily on Ghanaian data for their theses rather than on data from their own countries or data collected in field exercises. Yet teaching in demography suffers greatly without practical experience in field research. An integrated teaching and field research program offers at least four advantages:

- It helps provide badly needed original research. By active consultation between the centers and national governments (particularly central statistical offices and planning ministries), research projects can be designed that will be of direct interest and relevance to those governments.

- Such research would enable the gradual development of a body of comparative studies among African countries, thus illuminating salient differences and similarities.

- A research program could also establish contacts between the centers and national universities or training institutes, especially if students were jointly supervised on their individual research projects by a member of the university faculty and a center staff member. The quality of training would also be improved.

- Research integrated into the teaching program would provide practical training for students in research design, data collection, and data analysis, all functions likely to be required in their eventual positions at home.

It is likely that Chukuka Okonjo, the new director of RIPS, will institute an active research program along the lines suggested. No such changes appear likely at IFORD in the foreseeable future.

There has also been discussion recently at meetings organized by the Economic Commission for Africa and within the United Nations on the need to expand the range of training at the regional centers to include ad hoc or short-term training courses for policy-makers, administrators, and technical staffs of national governments. Such courses could run from two weeks to several months, and might include the following:

- Symposia on general population matters, particularly the relevance of demographic levels and trends to national development planning, for ministerial or provincial-level policy-makers;

- Technical seminars for senior civil servants in ministries of economic planning, health, education, and labor on the relationship of demographic change and economic growth and relevant subfields;

- Courses on population for influential government officials and others with no advanced training in demography;

- Refresher and specialized courses on such topics as vital registration systems, censuses, new techniques of demographic data collection and analysis, population projections, sample surveys, and computer data processing.

Such courses would undoubtedly be of value, but much work remains on defining their content, direction, and intended audiences.

Other UN-Supported Training Programs

In addition to its support of the three regional centers, the United Nations provides support to several statistical training centers and institutes and to several demographic units within African universities. Table 6 summarizes the nature and extent of such support. Individual programs are discussed in the country reports.

Goals and Recommendations

Institutional development is a major strategy for addressing national population problems. Its focus is primarily on universities, special institutes, and/or units within government agencies that have population training and research functions. Institutional development differs from ad hoc support of research projects in aiming not only at the generation of new knowledge directed at national problems but at the establishment of a sustained capacity to generate such knowledge locally. It differs from support of professional training programs because it also aims to create national institutions able to influence emerging national population policies.

The ultimate goal of institutional development is improved public policies in response to, or adjusting, population processes, promulgated by national leaders convinced of the relationship of population dynamics to national development goals, and implemented by trained local personnel.

The intermediate goals of institutional development efforts are to develop local institutional capacities in developing countries to: (1) train people able to contribute directly or indirectly to the long-term goals of improved national population policies, (2) produce research relevant to that goal, and (3) provide technical support to implement those population policies.

Institutional development is thus an aspect of guided social change, with the ultimate goal of inducing social and political values supportive of new population policies and the intermediate goal of producing local capabilities to implement those policies. Although external donor agencies can assist the process of change by identifying national scholars, planners, and administrators with appropriate interests, and by the short-term provision of financial, technical, and professional support, the long-term encouragement, promulgation, and implementation of national population policies must rest on local funding and trained and committed personnel. The training of such personnel and the process of inducing new policies

are of necessity time-consuming activities, with strategies and timetables that must reflect differing local contexts.

Recommendations

Improved Communications

The growing number of DARSS programs in African universities and autonomous institutes highlights the need for more and better communication among African population specialists. Within universities, communications between "faculties" is often poor. It is not uncommon that a foreign visitor to an African university, following the usual systematic and harried schedule of appointments, is more aware by the end of the visit of common interests among the staff of separate faculties than the staff members themselves. Donor agencies supporting DARSS programs at more than one institution can play an important role in stimulating and facilitating communications and the sharing of relevant experiences within and among those institutions.

An important step in the direction of improved communications was the formation in May 1974 of the Population Association of Africa. The association's inaugural conference, held in Ibadan, was attended by approximately 100 persons working in the population field in Africa or in relation to Africa. Support for the association was provided by several donor agencies, including IDRC, the Population Council, USAID, SIDA, and the UNFPA. The association's officers are drawn from several regions of Africa, and its periodic conferences and meetings will facilitate the flow of information among members. A biannual journal, Jimlar Mutane, will publish scholarly articles and news items of interest to population specialists. The association intends to seek financial support for its future activities from African governments and international donor agencies. General Gowon of Nigeria prepared an address that was read for him at the association's inaugural conference and, in a letter to the association's president, indicated willingness to consider granting some financial support as well.

Additional means of communication among population programs that should be pursued include the exchange of faculty visits to present seminars on current research, cooperative research ventures such as the studies currently being conducted as part of the International Labor Organization's World Employment Program, and even such basic exchanges as that of course outlines and examinations. Funds to support such activities could be made part of grants for institutional development.

Emphasis on Developing DARSS in National Institutions

Several knowledgeable population specialists have suggested that an international center for population research and analysis should be established in Africa to undertake some of the research recommended here to provide technical support to others so engaged, and to issue scientifically authoritative analyses of African population trends and the relationships between population dynamics and African development goals. In part, these were among the original objectives of the United Nations regional institutes in Africa, citing CELADE as a relatively successful exemplar. The findings of this inventory of institutional development needs and capabilities in Africa and a glance at the political context of contemporary Africa strongly suggest, however, that the establishment of such an international center in the foreseeable future, however desirable in concept, is premature.

The economic development of African countries and the consolidation of national sovereignties against both external and internal pressures far surpass pan-African interests or possibilities at this point in African history. Major intellectual and political issues, no matter how international in scope, urgency, or impact, will first be addressed in national terms unless overwhelmingly convincing arguments can be made for intraregional cooperation. No such arguments currently exist with respect to population in Africa. There is no single "African population problem." There are numerous population issues within numerous independent African states that must be examined within widely differing political

economic, social, and institutional contexts. Although regional organizations such as the Population Association of Africa and CODESRIA[25] should be encouraged and supported in their efforts to improve the flow of information, the development of national DARSS institutions within Africa is the most feasible and urgent priority for the international donor community in the foreseeable future.

Priorities for Institutional Development in Africa

Institutional development is by no means a scientific process, and the establishment of priorities for future funding necessarily reflects organizational experiences and biases. The following priority rankings are essentially conservative in nature, reflecting DARSS program success to date and the likelihood that less funding will be available over the next five years or so for the development of new programs. The first-priority countries are therefore those with already launched DARSS programs and favorable population policies. If, on the other hand, one were to emphasize the most promising new possibilities, and assume the availability of adequate funding, one could make a strong case for reversing the first and second priority rankings. Similarly, if funding were available, existing programs in third-priority countries could be strengthened, and expressed interests in third- and fourth-priority countries should be further explored and built upon.

Generally, the following criteria were used in establishing the priority rankings:

- The current status of DARSS programs, with highest priority given to those already launched;

- Official population policies, with most weight given to countries in policy categories A and B;

---

25. Council for the Development of Economic and Social Research in Africa.

- The feasibility of establishing DARSS programs, measured both by current activities and by levels of expressed interest;

- The size of national populations, generally giving higher priority to larger countries; and

- The likelihood of funding being available over the anticipated five or more years required to establish a DARSS program.

Using these criteria, five categories of countries emerge in terms of priorities for institutional development in Africa.

First Priority

Country	DARSS Status	Policy Category	Mid-1973 Population (millions)
Ghana	Major Program	A	9.9
Kenya	" "	A	12.0
Nigeria	" "	B	79.8
Tanzania	" "	B	14.3
Zaire	" "	B	18.7
			134.7 million
Cameroon	(IFORD)		

Second Priority

Country	DARSS Status	Policy Category	Mid-1973 Population
Ivory Coast	Interest Expressed	C	4.6
Senegal	" "	C	4.2
			8.8 million

Third Priority

Country	DARSS Status	Policy Category	Mid-1973 Population
Liberia	Existing Program	B	1.2
Sierra Leone	" "	C	2.8
Upper Volta	" "	C	5.7
Zambia	" "	C	4.7
			31.8 million

Fourth Priority: Interest expressed but possibilities limited.

Country	DARSS Status	Policy Category	Mid-1973 Population
Chad	Interest Expressed	C	4.0
Rwanda	" "	C	3.9
Togo	" "	C	2.0
			9.9 million

Fifth Priority: No immediate prospects for institutional development

Botswana	Malawi
Burundi	Mali
Central African Republic	Mauritania
Congo	Mozambique
Dahomey	Namibia
Ethiopia	Niger
Gabon	Reunion
Gambia	Rhodesia
Guinea	Somalia
Guinea-Bissau	South Africa
Lesotho	Swaziland
Madagascar	

Summary of Country Recommendations

The following brief summaries are abstracted from the country reports. Further elaboration of current DARSS activities and future prospects can be found in those reports.

First-Priority Countries

Ghana

a) Expansion of DARSS teaching at the University of Ghana;

b) Continued support of research through the Demographic Unit in the Department of Sociology and the Population Dynamics Program;

c) Provision of postdoctoral fellowships for further training, research, or writing abroad;

d) Development of a field research program at RIPS in collaboration with students' home governments or national universities;

e) Development of short-term training programs at RIPS for African government officials;

f) Development of a consultancy and technical assistance capacity at RIPS and/or University of Ghana.

Kenya

a) Expansion of DARSS teaching and research within the Population Studies and Research Center and individual departments at the University of Nairobi;

b) Provision of staff development awards to increase the number of Kenyan faculty with training in population;

c) Development of a close working relationship between the Population Studies and Research Center, the Kenya National Family Planning Program, and government ministries responsible for development planning.

Nigeria

a) Continued support of teaching, research, and staff development at the universities of Ife, Ibadan, Lagos, and Nigeria in such a manner as to enhance complementarity among their programs rather than competition;

b) Greater efforts to enhance demographic skills and population interest among staff of the Nigerian Institute of Social and Economic Research;

c) Continued support of efforts to further involve Nigerian universities in policy analysis and the introduction of demographic considerations into social and economic planning.

Tanzania

a) Continued support of teaching and research by the Bureau of Resource Assessment and Land Use Planning (BRALUP) of the University of Dar es Salaam;

b) Significantly increased efforts to train Tanzanians to replace expatriate staff in population;

c) Continued encouragement of the growing ties between BRALUP and Tanzanian government ministries charged with social and economic planning through seminars, staff training, and technical assistance.

Zaire

a) Continued support of the Department of Demography at the National University of Zaire, Kinshasa campus;

b) Consideration of establishing a complementary program at the University's Lubumbashi campus;

c) Support of efforts to increase cooperation between UNAZA and government agencies responsible for social and economic planning.

Cameroon (IFORD)

a) Development of a field research program in cooperation with students' home governments;

b) Reducing the length of the basic diploma course to one year, by providing remedial courses in mathematics or statistics as needed;

c) Increasing the social science content of the training program and reducing the emphasis on mathematics;

d) Development of a capacity for consultancy and technical assistance for Francophone African countries.

Second-Priority Countires

Ivory Coast

a) Further exploration of the feasibility of expanding DARSS teaching and research within the University of Abidjan and its affiliated research institutes;

b) Encouragement of a closer working relationship between the University of Abidjan and the Ministry of Planning.

Senegal

a) Further exploration of DARSS interest within the University of Dakar and the Institute of Economic Development and Planning (IDEP);

b) Technical support and staff development assistance to the Demographic Division of the Bureau of Statistics.

Third-Priority Countries

Liberia (University of), Sierra Leone (University of), Upper Volta (Voltaic Center for Research in Social Science), and Zambia (University of).

a) Provision of expatriate demographic expertise to advise on existing and proposed DARSS activities (mostly through UNFPA);

b) Fellowship support for staff development;

c) Provision of material support in the form of population literature, computer software, teaching- and research-related equipment;

d) Short-term consultancy services and sympathetic consideration of research proposals.

Table 1

AFRICA: BASIC DEMOGRAPHIC DATA

	Population Estimates Mid-1973 (millions)	Crude Birth Rate	Crude Death Rate	Rate of Population Growth (percent)	Number of Years to Double Population	Population Projections 1985 (million)
WESTERN AFRICA	110	49	24	2.5	28	155
Cape Verde Islands	0.3	39	14	2.5	28	0.3
Dahomey	2.9	51	26	2.6	27	4.1
Gambia	0.4	42	23	1.9	37	0.5
Ghana	9.9	47	18	2.9	24	14.9
Guinea	4.2	47	25	2.3	30	5.7
Guinea-Bissau	0.6	41	30	1.1	63	0.7
Ivory Coast	4.6	46	23	2.4	29	6.4
Liberia	1.2	50	23	2.7	26	1.6
Mali	5.5	50	27	2.3	30	7.6
Mauritania	1.3	44	23	2.1	33	1.7
Niger	4.2	52	23	2.9	24	6.2
Nigeria	59.6	50	25	2.6	27	84.7
Senegal	4.2	46	22	2.4	29	5.8
Sierra Leone	2.8	45	22	2.3	30	3.9
Togo	2.0	51	26	2.5	28	2.8
Upper Volta	5.7	49	29	2.0	35	7.7
EASTERN AFRICA	106	47	22	2.5	28	149
Burundi	3.9	48	25	2.3	30	5.3
Ethiopia	26.8	46	25	2.1	33	35.7
Kenya	12.0	48	18	3.0	23	17.9
Malagasy Republic	7.5	46	25	2.1	33	10.8
Malawi	4.8	49	25	2.5	28	6.8
Mauritius	0.9	25	8	1.7	41	1.2
Mozambique	8.2	43	23	2.1	33	11.1
Reunion	0.5	30	8	2.2	32	0.7
Rhodesia	5.6	48	14	3.4	21	8.6
Rwanda	3.9	52	23	2.9	24	5.7
Somalia	3.0	46	24	2.2	32	4.2
Tanzania	14.3	47	22	2.6	27	20.3
Uganda	9.3	43	18	2.6	27	13.1
Zambia	4.7	50	21	2.9	24	7.0

Table 1
AFRICA: BASIC DEMOGRAPHIC DATA

	Population Estimates Mid-1973 (millions)	Crude Birth Rate	Crude Death Rate	Rate of Population Growth (percent)	Number of Years to Double Population	Population Projections 1985 (millions)
MIDDLE AFRICA	38	44	24	2.1	33	52
Angola	6.1	50	30	2.1	33	8.1
Cameroon	6.2	43	23	2.0	35	8.4
Central African Republic	1.6	46	25	2.1	33	2.2
Chad	4.0	48	25	2.3	30	5.5
Congo (People's Republic of)	1.0	44	23	2.1	33	1.4
Equatorial Guinea	0.3	35	22	1.4	50	0.4
Gabon	0.5	33	25	0.8	87	0.6
Zaire	18.7	44	23	2.1	33	25.8
SOUTHERN AFRICA	25	41	18	2.4	29	34
Botswana	0.7	44	23	2.2	32	0.9
Lesotho	1.1	39	21	1.8	39	1.4
South Africa	21.7	41	17	2.4	29	29.7
Namibia (Southwest Africa)	0.7	44	25	2.0	35	0.9
Swaziland	0.5	52	24	2.8	25	0.7

Source: Population Reference Bureau, 1973 World Population Data Sheet. The population of Nigeria, according to the provisional figures released in May 1974, is 79.8 million.

Table 2
AFRICA: SELECTED SOCIOECONOMIC INDICATORS

	Per Capita GNP ($US)[a]	% Dependent Population[b]	% Urban[c]	% Literate[d]	Life Expectancy at Birth[e]	Infant Mortality[f]	Inhabitants per Physician[g]	Daily Per Capita Caloric Intake[h]	Annual Rate of Urban Growth 1950-1970[i]
WESTERN AFRICA		47							
Cape Verde Islands	160	45	8.0	39.3		121			3.5
Dahomey	90	49	13.3		39	149	32,024	2,170	6.5
Gambia	120	41	10.0		41	125	18,947	2,320	3.3
Ghana	310	48	31.2		46	156	12,392	2,070	6.0
Guinea	120	51	11.2			216	49,140	2,060	6.5
Ivory Coast	310	46	21.3		41	159	13,859	2,430	7.7
Liberia	240	40	10.1	13.9		137	10,455	2,290	4.4
Mali	70	52	12.9	4.0	37	190	41,452	2,130	4.0
Mauritania	140		7.4		41	187	17,206	1,990	5.1
Niger	90	48	8.2	1.5	41	200	56,667	2,170	6.2
Nigeria	120	46	22.8		37		20,526	2,290	4.9
Portuguese Guinea	250	40			34		17,667		
Senegal	230	45	26.0	10.4	41		14,943	2,300	3.7
Sierra Leone	190	42	13.9	9.6	41	136	17,114	2,160	3.7
Togo	140	51	13.3			163	29,706	2,210	6.7
Upper Volta	60	45	3.7			182	92,759	2,060	4.9
EASTERN AFRICA		48							
Burundi	60	50	2.6			150	60,000	2,330	
Ethiopia	80	47	8.7		39		71,797	1,980	5.0
Kenya	150	49	10.2		48		7,829	2,200	6.2
Malagasy Republic	130	49			38	102			
Malawi	80	47	5.9	33.7	39	120	37,982	2,400	6.5
Mauritius	240	45	41.7	71.5	60	65	3,886	2,370	2.7
Mozambique	240	45	5.7		41		14,779	2,130	5.9
Reunion	800	49	27.3	59.9		58	2,543		3.0
Rhodesia	280	51	19.8		51	122	6,579	2,550	7.3
Rwanda	60		0.3		41	133	62,787	1,900	2.1
Somalia	70		20.2		39	190	18,725	1,770	3.1
Tanzania	100	47	6.3	42.7	41	162	29,705	1,700	5.8
Uganda	130	49	9.5	36.8	48	160	9,512	2,160	7.7
Zambia	400	49	23.6	61.0	44	159	13,518	2,250	5.8

Table 2
AFRICA: SELECTED SOCIOECONOMIC INDICATORS

	Per Capita GNP ($US)[a]	% Dependent Population[b]	% Urban[c]	% Literate[d]	Life Expectancy at Birth[e]	Infant Mortality[f]	Inhabitants per Physician[g]	Daily Per Capita Caloric Intake[h]	Annual Rate of Urban Growth 1950-1970[i]
MIDDLE AFRICA		45							
Angola	300	45	14.3	4.3	34	192	8,354	1,910	5.0
Cameroon	180	42	20.5		41	137	25,956	2,230	5.9
Central African Republic	140	45	25.4			190	38,333	2,170	5.4
Chad	80	49	6.9	12.1		160	60,317	2,240	4.9
Congo (People's Republic of)	300	45	29.7		41	180	8,571	2,160	4.9
Equatorial Guinea	210	38	30.7		41		35,000		5.3
Gabon	630	42	19.2	22.2		229	5,104	2,180	5.6
Zaire	90	45	16.2	39.2		115	33,713	2,040	7.4
SOUTHERN AFRICA		44							
Botswana	110	46	4.1		41	175	15,854		8.6
Lesotho	90	48		44.0	44	181	31,000		3.2
South Africa		43	50.5		49	138	1,502	2,730	3.2
Namibia (Southwest Africa)	760	45	31.8	45.2	39				5.8
Swaziland	180	50	4.6		41	168	7,885		11.5

a. 1973 World Population Data Sheet, Population Reference Bureau, Inc.
b. 1973 World Population Data Sheet, Population Reference Bureau, Inc.
c. Population and Vital Statistics Report, Series A, Vol. 26, No. 1 (January 1974), pp. 30ff, 38ff, column 3.
d. Population and Vital Statistics Report, Series A, Vol. 26, No. 1 (January 1974), pp. 30ff, 38ff, column 15.
e. 1973 World Population Data Sheet, Population Reference Bureau, Inc.
f. 1973 World Population Data Sheet, Population Reference Bureau, Inc.
g. Statistical Yearbook, 1972, Table 202, p. 747.
h Statistical Yearbook, 1972, Table 162, pp. 524-530.
i. Population and Vital Statistics Report, Series A, Vol. 26, No. 1 (January 1974), pp. 30ff, 38ff, column 5.

Table 3
OFFICIAL POPULATION POLICIES IN SUB-SAHARAN AFRICA

Country	Policy	Date	Comment
Zaire	B	1973	In his official annual address on December 5, 1972, President Mobutu Sese Seko expressed interest in limiting births to "desirable births." In the opening speech to the seminar on "maternity based desirable births" held in Kinshasa in March 1974, the Minister of Health stated "We believe ... that a moderate demographic growth limited to desired birth is a part of the basic equilibrium of a modern country in full development." A government agency, PONECO, has initiated a family planning clinic in Kinshasa and is training medical and paramedical personnel in contraceptive techniques.
Botswana	A	1970	The target of the 1970-75 Development Plan is a population growth rate not to exceed 2.5 percent per year in the decade 1970-1980. As part of the 1973-78 Development Plan, the government plans a rapid expansion of the rural health services, all of which will provide family planning. Financial assistance is being provided by the UNFPA, USAID, the Danish International Development Agency, and IPPF (which established a subsidiary there in 1971).
Lesotho	C		No official policy, but the government has begun to become aware of pressures resulting from uneven population distribution, with the population concentrated in the western lowlands and in mountain valleys.
South Africa and Namibia	B	1966	The government has been supporting family planning activities since 1966, when it began to reimburse clinics for family planning as well as for other health services. The private National Council for Maternal and Child Welfare is an affiliate of the International Planned Parenthood Federation. From a laissez-faire attitude, the government is moving toward more open support of family planning, especially among Africans.

Table 3

OFFICIAL POPULATION POLICIES IN SUB-SAHARAN AFRICA

Country	Policy[b]	Date	Comment
WEST AFRICA			
Dahomey	B	1969	The government's development plan calls attention to the problems of education and employment posed by the high proportion of the population under age 15. The maternal and child health service incorporates the concept of child spacing. The Family Planning Association is now (1972) officially registered and is headed by the Director of Social Services of the Ministry of Health.
Gambia	B	1969	The private Family Planning Association is permitted to use Ministry of Health clinics and personnel in providing family planning services. Also, contraceptives are imported duty-free.
Ghana	A	1969	In March 1969 the government published a national population policy to reduce the population growth rate and to offer to Ghanaians a choice of family size as outlined in a population policy paper entitled Population Planning for National Progress and Prosperity. The organizational arrangement for the family planning aspects of the population policy was approved in August 1969 and by Cabinet decision in January 1970, the National Family Planning Programme was established. The program was formally launched in May 1970. The program utilizes existing facilities and personnel in both the public and private sectors, with the planning, coordination, and funding roles assigned to the Ministry of Finance and Economic Planning. Family planning information and services are available to all, regardless of ability to pay, age, or number of living children.
Guinea	C		The population problem is really the unequal distribution of scarce resources rather than the number of people.
Guinea-Bissau	C		Only family planning methods approved by the Catholic Church are acceptable.
Ivory Coast	C		No official policy. Contraceptives and family planning services are available but limited. Official sentiment is pronatalist.
Liberia	B	1973	In a statement released on May 1, 1973, President W.R. Tolbert, Jr. stated, "The wholesome functioning society envisages an integrated development plan of qualitative improvement in the standard of living for all our people. This involves ... maternal and child health and family planning ... Responsible parenthood is just as important as responsible fiscal policy. We owe it to ourselves and to posterity to take advantage of modern technology wherever it is available."

Table 3
OFFICIAL POPULATION POLICIES IN SUB-SAHARAN AFRICA

Country	Policy	Date	Comment
Mali	B	1971	Although the government does not have an explicit population policy, the Malian Association for the Protection and Promotion of the Family was established by decree in July 1971 to assist families in spacing births, to consider steps to deal with high rates of maternal and infant mortality, and to examine the provision of health services. A recently established Center for Population Study is conducting research on fertility patterns and attitudes. Repeal of the French legislation forbidding the sale of contraceptives has been achieved, and services and supplies are available at the pilot family planning clinics operating with support from the International Development Research Centre of Canada.
Mauritania	C		No official policy and no organized family planning program. The government is opposed to any attempt to regulate population. A maternal/child health center in the capital gives advice on family planning and provides contraceptives on request for medical reasons. Orals are available in pharmacies.
Niger	C		Government is reluctant to sponsor any program whose central purpose or primary public identification is family planning. A high infant mortality rate, poor public health facilities, and widespread poverty militate against a population policy directed at reduced fertility.
Nigeria	B	1970	In an address prepared for the inaugural conference of the Population Association of Africa held at the University of Ibadan in May 1974, the head of the state, General Yakubu Gowon, stated that population growth must be slowed for Nigeria to achieve sustained social and economic development. The present population growth rate, he noted, was outstripping the rate of food production and creating concern with regard to fixed assets such as land. The Second National Development Plan, 1970-74, calls for "Government to encourage the citizens to develop a balanced view of the opportunities for individual family planning on a voluntary basis. ..."
Senegal	C		A private family planning association was formed in Dakar in 1970, but collapsed the following year owing to internal political and organizational difficulties. A private clinic supported by the Pathfinder Fund provides limited family planning services in the capital. The government is interested in the use of demographic data for economic planning purposes, but does not favor a policy directed at lowering fertility.

Table 3
OFFICIAL POPULATION POLICIES IN SUB-SAHARAN AFRICA

Country	Policy	Date	Comment
Sierra Leone	C		The government does not formally endorse family planning but allows the private Family Planning Association (formed 1960) to use health facilities at government hospitals and clinics. It has also sent government officials for maternal/child health and census training. The SLFPA is free to conduct mass information, information, and communication campaigns on family planning. Contraceptives may be imported duty free.
Togo	C		No official policy, but there is apparently some interest in population studies at the University of Benin. Togo is the only government in Francophone West Africa to have held a 100 percent census (fully financed by the Togolese government).
Upper Volta	C		The government does not support family planning and contraceptives are difficult to obtain, but the government has a significant interest in matters of population distribution and migration, which may lead to a national policy on population distribution in the near future.
EAST AFRICA			
Burundi	C		No official policy. Efforts to include family planning in maternal/child health services were interrupted by civil conflict in recent years.
Ethiopia	C		The government does not support family planning but permits family planning services to be offered in some areas in connection with maternal and child health programs and clinics. A local Family Guidance Association offers family planning services. However, the 1963-67 Five Year Development Plan stated that "a rapid growth of population is encouraging, both from the point of view of the availability of the labor force and the extension of the domestic market, particularly since Ethiopia is a sparsely settled country."
Kenya	A	1966	The government's policy is for the Ministry of Health to provide family planning service through the national health network, to combat malnutrition, improve maternal and child health, and slow the rate of population growth. Responsibility for education and motivation has been left to the Family Planning Association of Kenya. Clinics offering IUD's and oral contraceptives free of charge are set up wherever professional personnel are available. The government subsidizes private clinics that offer free conventional contraceptives.

Table 3
OFFICIAL POPULATION POLICIES IN SUB-SAHARAN AFRICA

Country	Policy	Date	Comment
Malagasy Republic	C		
Malawi	C		The government of Malawi does not believe the current growth rate (2.5 percent) will hinder economic or social development and views a doubling of the population with favor.
Mauritius	A	1965	As expressed in the Four-Year Development Plan, government policy is to reduce the gross reproduction rate from 1.92 in 1969 to 1.2[illegible] between 1980 and 1985. This represents a crude birth rate of 22.5 in the early 1980s. In 1972 the government assumed full responsibility for family planning and maternal and child health. However, the Family Planning Association continues to run two clinics and to promote education and motivation, while Action Familiale continues to receive a government grant to provide methods acceptable to the Catholic Church.
Mozambique	C		Only family planning methods approved by the Catholic Church are acceptable.
Rhodesia	B	1968	The Ministry of Health, the State Lottery and eighteen local authorities contribute financial support to the private family planning association. The association established eighteen new clinics in 1973 and is building a new clinic training center at Bulawayo. Free contraceptives are now provided by the Salisbury City Council. Most emphasis is placed on reaching the African population.
Rwanda	C		The government is opposed to family planning except by methods approved by the Catholic Church.
Somalia	C		The 1963-67 plan declares that "in view of the relatively small size of the population and the very large area and natural resources which would be progressively exploited through economic development, the country is not likely to have a population problem in the foreseeable future."
Tanzania	B	1970	Tanzania has no official population policy, but the government has tolerated the recent expansion of activities of the Tanzania Family Planning Association, of which the Minister of Labour and Social Welfare is chairman. In his address on September 16, 1973 to the 16th biennial conference of TANU (the country's political party), President Nyerere stated that "whatever we produce has to be divided between an increasing number of people every year. ... It is no use saying that these extra 380,000 people have hands as well as mouths. For the first ten years of their life, at the very least, children eat without producing."

Table 3
OFFICIAL POPULATION POLICIES IN SUB-SAHARAN AFRICA

Country	Policy	Date	Comment
Uganda	B	1972	The Third Five-Year Development Plan, 1972-77, discusses the problems created by the high rate of population growth estimated at about 2.6 percent per year. In consequence the government provides financial support to the private family planning association. However, major reductions in the growth rate are not expected with the limited program envisioned by the plan.
Zambia	C		The government of Zambia has no official population policy, but has supported significant progress by supporting the establishment of the Family Planning and Welfare Association of Zambia in September 1971 [illegible] also allows family planning services to be integrated into the country's basic health services.
MIDDLE AFRICA			
Angola	C		Only family planning methods approved by the Catholic Church are acceptable.
Cameroon	C		The government considers the country underpopulated. Family planning is not promoted and is regarded strictly as a private matter. In 1970, the government stated that it "does not contemplate any measures to limit population growth until the target population of 15 million is reach." (1973 population = 6.2 million)
Central African Republic	C		No official policy, but government and popular sentiment is pronatalist.
Chad	C		Same as Central African Republic.
Congo	C		Population problems seen as result of inequitable distribution of scarce economic resources.
Equatorial Guinea	C		Only family planning methods approved by the Catholic Church are acceptable.
Gabon	C		Explicitly pronatalist. Some parts of the country exhibit significant problems of subfertility.

Table 3
OFFICIAL POPULATION POLICIES IN SUB-SAHARAN AFRICA

Country	Policy	Date	Comment
Swaziland	B	1969	The government of Swaziland is showing some interest in population problems. The 1965 Development Plan gives authority for the establishment of a family planning program in the Ministry of Health. The government has been working to launch a small, low-key family planning program with assistance from UNFPA, UNICEF, and WHO.

Notes

a. Sources

Dorothy Nortman, "Population and Family Planning Programs: A Factbook," Reports on Population/Family Planning, Number 2, Table 6, December 1974.
B. Maxwell Stamper, "Population Policy in Development Planning: A Study of Seventy Less Developed Countries," Reports on Population/Family Planning, Number 13, May 1973.
USAID, Population Program Assistance, FY1973, pp. 131-160.

b. Classification of Policies:

A = official policy to reduce the population growth rate
B = official support of family planning activities for other than demographic reasons
C = residual category

Table 4
DISTRIBUTION OF OFFICIAL POPULATION POLICIES
IN SUB-SAHARAN AFRICA BY LANGUAGE GROUP

Policy Category	Francophone/Spanish Portuguese		Anglophone		Totals	
	No.	%	No.	%	No.	%
A	0	0	4	22	4	10
B	3	14	8	45	11	27
C	19	86	6	33	25	63
	22	100%	18	100%	40	100%

Table 5
CURRENT STATUS OF DARSS TEACHING AND RESEARCH IN AFRICA

	Major university-based Program	Some university-based DARSS	Expressed University Interest	Significant Non-university DARSS	No significant Activity
Botswana					X
Burundi					X
Cameroon [1]				X	
Central African Republic					X
Chad [2]			X		
Congo					X
Dahomey					X
Ethiopia [3]		X			
Gabon					X
Gambia					X
Ghana [4]	X				
Guinea					X
Ivory Coast [5]			X		
Kenya [6]	X				
Lesotho					X
Liberia [7]		X			
Madagascar					X
Malawi					X
Mali					X
Mauritania					X
Mozambique					X
Namibia					X
Niger					X
Nigeria [8]	X				
Reunion					X
Rhodesia					X
Rwanda [9]		X			
Senegal [10]		X			
Sierra Leone [11]		X			
Somalia					X
South Africa					X
Swaziland					X
Tanzania [12]	X				
Togo [13]			X		
Uganda [14]		X			
Upper Volta [15]				X	
Zaire [16]	X				
Zambia [17]		X			

Notes

Definitions:

Major university-based program = center, institute, department of demography or population studies

Some university-based DARSS = courses in demography or population studies offered as a regular part of an established department or curriculum

Expressed university interest = request for assistance in establishing DARSS program or courses received by Population Council or other major donor agencies

Table 5
CURRENT STATUS OF DARSS TEACHING AND RESEARCH IN AFRICA

Significant nonuniversity DARSS = important demographic research or training known to be underway in government statistical office, other government agencies, or autonomous research institutes.

1. Cameroon: United Nations Institut de Formation et de Recherche Demographique (IFORD).

2. Chad: Proposal to establish a Chadian Population Institute submitted to USAID by the University of North Carolina but declined; interest presumably still exists.

3. Ethiopia: Courses available in Institute of Statistics, Haile Selassie I University.

4. Ghana: Demographic Unit within Department of Sociology; Population Dynamics Program; United Nations Regional Institute for Population Studies; all within or associated with University of Ghana. Some teaching and a longitudinal mortality study at the University of Cape Coast.

5. Ivory Coast: Request to Population Council for senior demographer to introduce DARSS in Faculty of Economics, Spring 1973, declined; interest presumably exists.

6. Kenya: Ongoing programs in departments of geography, sociology, and Institute of Development Studies; newly established Population Studies and Research Center.

7. Liberia: UNFPA-supported Demographic Unit within the Department of Sociology and Anthropology.

8. Nigeria: Established DARSS teaching and research programs at universities of Ife, Ibadan, Lagos, and Nigeria.

9. Rwanda: Some teaching and research in Department of Sociology, University of Rwanda.

10. Senegal: Some DARSS teaching in Departments of Geography and Economics, University of Dakar; several important DARSS research projects underway in the Demographic Division of the Bureau of Statistics.

11. Sierra Leone: UN-supported Demographic Unit within the University of Sierra Leone (Fourah Bay College).

12. Tanzania: Significant DARSS training and research conducted by the Demographic Unit of the Bureau of Resource Assessment and Land Use Planning (BRALUP) of the University of Dar es Salaam.

13. Togo: Request to Population Council to establish a Population Studies Center within the University of Benin, 1973, declined; interest presumably still exists.

14. Uganda: DARSS training and research within the UN-sponsored Institute of Statistics and Applied Economics, Makerere University.

15. Upper Volta: Significant DARSS research conducted by Centre Voltaique de Recherche en Sciences Sociales (CVRS).

16. Zaire: Newly established Department of Demography in the National University of Zaire (Kinshasa campus), and interest in a similar development atthe Lubumbashi campus.

17. Zambia: Some DARSS teaching and research within the School of Humanities and Social Sciences; some research in the Institute of African Studies, University of Zambia; UNFPA assistance for demographic research in the Central Statistical Office.

Table 6

TEACHING OF DEMOGRAPHY IN UNITED NATIONS-SPONSORED TRAINING AND RESEARCH CENTERS IN AFRICA

Type and Name	Year of Establishment	Area Served	Languages	Duration of Demographic Course (Acad. Year)	Administrative Arrangement and Number of Full-Time UN Experts Assigned
Higher-Level Demographic Centers					
Cairo Demographic Centre, Cairo (Egypt)	1963	Interested countries of Africa and Arabic-speaking countries outside Africa	E,A	1:Gen.Dip. +1:Sp.Dip. +1:N.Phil. (Demog.)*	UN and government of Egypt; 6 UN experts
Regional Institute for Population Studies, Accra (Ghana)	1971	English-speaking countries of Africa	E	1:Diploma +1:Master's Degree (Demog.)	UN and government of Ghana; 5 UN experts
Institute de Formation et de Recherche Demographiques Yaounde (Cameroon)	1971	French-speaking countries of Africa	F	2:Basic courses +1:Sp.	UN and government of Cameroon; 5 UN experts
Higher-Level Demographic Units at Universities					
Demographic Unit, Fourah Bay College, University of Sierra Leone (Sierra Leone)	1971 Dec.	Sierra Leone	E	22-60 hours to students of geography, economics and social studies, and sociology	UN, government, and University of Sierra Leone; 2 UN experts (none in position at present)
Demographic Unit, University of Lagos, Lagos (Nigeria)	1973	Nigeria	E	Postgraduate courses in demography	University of Lagos; 1 UN expert

Table 6

TEACHING OF DEMOGRAPHY IN UNITED NATIONS-SPONSORED TRAINING AND RESEARCH CENTERS IN AFRICA

Type and Name	Year of Establishment	Area Served	Languages	Duration of Demographic Course (Acad. Year)	Administrative Arrangement and Number of Full-Time UN Experts Assigned
Higher-Level Statistical Centers					
Institut national de la statistique et de l'economic applique, Rabat (Morocco)	1961	French-speaking countries of Africa	F	3	UN Special Fund Project; from 1965: 2 UN experts
Institute of Statistics & Applied Economics, Makerere (Kampala)	1969	English-speaking countries of Africa	E	1(part of B.Sc.) +1 (M.Sc. proposal)	UN Special Fund Project; 6 UN experts
Middle- and Intermediate-Level Statistical Centers					
Statistical Training Center, Achimota (Ghana)	1961	West Africa	E		Established by UN and government of Ghana; merged with the Institute of Statistical, Social and Economic Research, University of Ghana, in 1966; no UN expert at present
Statistical Training Center Addis Ababa (Ethiopia)	1961	North and East Africa	E	1 semester	Established by UN and government of Ethiopia; merged with the Institute of Statistics, Haile Selassie I University in 1967; 1 UNESCO expert, and part-time assistance of ECA staff
East African Statistical Center, Dar es Salaam (Tanzania)	1965	Eastern and Southern Africa	E	30 hours	Established by UN and East African Community; since 1972 managed by East African Community. No UN expert at present; part-time assistance of ECA staff

Table 6

TEACHING OF DEMOGRAPHY IN UNITED NATIONS-SPONSORED TRAINING AND RESEARCH CENTERS IN AFRICA

Type and Name	Year of Establishment	Area Served	Languages	Duration of Demographic Course (Acad. Year)	Administrative Arrangement and Number of Full-Time UN Experts Assigned
Institut de Formation Statistique, Isounde (Cameroon)	1961	French-speaking countries of Africa	F	1:Agent technique 25 hours 2:Adjoint technique 60 hours	UN Special Fund Project from July 1969; 2 UN experts
Higher-Level Planning Institutes					
Institut Africain de Developpement et de Planification, Dakar (Senegal)	1963	Africa	E,F	4 hours	UN Special Fund Project (with ECA member States); 20 UN experts
Institute of National Planning, Cairo (Egypt)	1962	Egypt and Arab countries	A		Established with the assistance of Ford Foundation and the UN; at present a national institute

E = English

F = French

A = Arabic

Chapter 3

REPORT ON INSTITUTIONAL DEVELOPMENT IN DEMOGRAPHY AND RELATED SOCIAL SCIENCES

NORTH AFRICA AND THE MIDDLE EAST

Demarcation of Subregions

The populations of the Middle East and North Africa are situated in a semi-circle of countries bordering on the south and east of the Mediterranean Sea and extending eastward to the Persian Gulf and Iran. For a survey of institutions in demography and related social sciences, it is useful to distinguish five subregions as shown on the accompanying map.

The map shows several important features of the region as follows:

1. The area of each subregion is drawn proportional to population size and the actual number is shown in millions. There are altogether a little less than 200 million persons in the region. The number of independent countries is also shown by a circled number, excluding Israel which is not classified as a developing country. It will be useful to take account of

population size and numbers of countries when discussing needs for institutional development in the region as a whole.

2. Within each subregion, factors of language, educational and administrative tradition, and cultural affinity are more nearly homogeneous than between subregions. These factors make higher levels of interaction in institutional development possible within rather than between the subregions. The most permeable of the boundaries between subregions is that between Egypt and the Peninsular Arab Countries, so much so that a solid border is not shown between the two on the map.

Foreign and international organizations commonly recognize these five subregions in their administrative arrangements. For example, the Ford Foundation has principal offices in Tunis for the Maghreb, in Cairo for the Egyptian wing of the Eastern Arab Countries (plus Sudan), and Beirut for the Peninsular Arab Countries (plus Iran). During the 1960's when substantial foundation programs existed in Turkey and Iran, separate offices were maintained. In the United Nations, a similar pattern is observed. The U.N. Economic Commission for West Asia (ECWA) has a Population Office in Beirut that serves precisely the same area as that encompassed by the Peninsular Arab Countries. Officers serving in population for the U.N. Fund for Population Activities are also posted in terms of these five subregions wherever an officer must be responsible for groups of countries rather than one alone. Other examples could be given.

Demography of the Region

Current demographic conditions and trends appear to be remarkably similar from one subregion to another when each subregion is taken as a single population aggregate. In the late 1960's, total fertility varied among subregions from six to seven children per woman on average; the expectation of

life at birth varied from 51 to 55 years; and rates of population growth varied from 2.6 to 3.0 percent per year. When the demography of the region is studied by subregion, an extraordinary amount of variation in demographic processes in different parts of the region and within different socio-economic classes of the population is hidden in averages for the aggregates. The existence of great variation is revealed by studies based upon statistics of acceptable quality from a small number of places.

In a study of Kuwaiti Arabs, Allan Hill[1] measures total fertility at 6.8 children per woman in 1970. He finds no clear indication of fertility decline after more than two decades of heightened income, although it should be noted that income was not elevated for all individuals for the entire period. By contrast, an example can be taken from western Turkey where urban populations aggregating more than three million persons are bearing children within marriage at rates not much higher than those prevailing in Western Europe. However, earlier marriage in Turkey than in Western Europe makes total fertility higher. Nevertheless, in a number of cities it approaches as low a figure as 3.0 children per woman on average.

Absence of accurate demographic data, which is one of the most urgent statistical needs of the region, prevents grouping of the approximately 200 million persons living in the region along a fertility scale. It is even less possible to identify trends in fertility over a period of time, but strong indications of variation among countries on this score are also available from studies of particular subpopulations of the region. V.G. Valoras of the U.N. Cairo Demographic Center finds a slight elevation in Egyptian fertility between

---

1. Allan G. Hill, "The Demography of Kuwait," forthcoming in Demography.

1940 and 1965 without any subsequent decline on a national basis. Evidence of a decline after the mid-1960's in terms of acceptable statistics has yet to be presented.

By contrast, fertility in Tunisia and Turkey has declined. In Turkey, the crude birth rate prior to 1973 fell approximately one point per thousand population each year for at least a decade and is currently in the low 30's. For other countries the story is either different or unknown. A great gap in information exists with respect to the large national population of Iran, for which there are no acceptable measurements of the trend of the birth rate.

Mortality information is no better, although sufficient to hint at the existence of great variation also. Hill's study of Kuwait puts the female infant mortality rate at 40 per thousand and the expectation of remaining life at age 5 to 70 years (the expected age at death for those who reach age 5 is then 75 years). Few other national populations in the region have such good health conditions except possibly in the Lebanon. Generally, mortality is much heavier than in Kuwait. In Central Anatolia, for example, infant mortality exceeds 200 deaths per thousand births in rural areas, and the expectation of remaining life at age 5 is below 60 years. Every gradation between Central Anatolia's and Kuwait's mortality is probably present within the region, although doubts remain because it is not accurately observed. In the absence of good statistics, even the juxtaposition of fertility and mortality levels within the population groups is not predictable. No theory of demographic transition is available that can offer good guesses in advance of observation and measurement.

Migration flows within the region are similarly complex and unprecedented. High natural increase sets the stage for migration throughout most of

the region. As individuals age into the labor force they are forced by poor economic prospects in some of the countries to consider working elsewhere than where they were reared. Whether young workers (including highly skilled graduate professionals) move across international borders depends upon a number of factors that are primarily economic, but also political. Migration in the region is strongly oriented toward the centers of economic growth: to the Persian Gulf from Arab countries; to Western Europe from Turkey and North Africa; and to major cities from rural hinterlands everywhere in the region. Although some parts of the region are losing population to Europe, others (especially Iran and the Gulf) are attracting population both from within and outside the region.

Population Policy

In a recent United Nations regional conference in Beirut, Hanna Rizk assessed perceptions of population policy in the region and found serious misunderstanding about the welfare potentials of government intervention. In addition, a frequent confusion was to relate the subject of population policy to external efforts to subjugate countries in the region. He advised that special efforts be made to encourage open inquiry and to train specialists who can diagnose the population problems of the region in terms of the local conditions and aims.[2]

The objectives of governments in the region with respect to the classic determinants of population change (fertility, mortality, and migration) are notably obscure or confounded by other objectives in whose names policies are

---

2. Hanna Rizk, "Population Policies: Scope, Goals, Means, and Problems," Population Bulletin of the U.N. Commission for Western Asia, July 1974, pp. 132-154.

promulgated. Needs for information, analysis, and clarity in pointing toward policy options are great.

In the domain of fertility control, there are public programs in the three largest countries (Turkey, Egypt, and Iran) with special budgets, administrative powers, and physical facilities. However, none of the three programs has achieved measurable demographic effects additional to reductions in fertility that could be attributed to other factors. This negative assessment is necessarily conjectural to a certain extent, because accurate measurement and attribution of results to programs are lacking.

Adjustment to demographic processes is receiving limited attention in national and regional planning bodies. Study of the consequences of rapid buildup of population in major urban centers, such as Tehran, has led to policy action, mostly ineffective, to disperse urban growth over a larger number of urban centers. Specialists in population analysis have expressed the view that more intensive study of consequences would lead to more probing of causes, possibly creating greater motivation than presently exists for action at a policy level to curb excessive rates of population increase. Certainly, in the Middle East and North Africa, population policy changes are unlikely unless they are based on a reappraisal of the self-interest of peoples in the region.

Criteria for External Assistance

Capacity to analyze, to understand, and to communicate by training and experience the nature of population issues is clearly needed. Criteria by which to judge where external assistance for institutional development would be most valuable to achieve these ends are suggested as follows:

1. Size of population served is on the order of 20 million or more. If more than one international border divides the service area (more than two

countries), the criterion could be reduced to 10 million.

2. The proposed institutional development program is planned on a large enough scale to assure continuity, impact, and resiliency in the face of setbacks.

3. Social science capabilities are, or are expected soon to become, relatively strong in the institution.

4. The institution has leadership and prospects for local funding that promise timely phasing toward self support, the latter to include their own recruiting and appointment of staff.

These are minimal criteria. In the survey of subregions, a search for qualifying institutions has been made. Those that fall outside the category of potential candidates, given present circumstances and information, are omitted or only briefly noted in the report. Among those that qualify, two categories are distinguished: first and second priority. External agencies are already active in a number of places, and a classification of "first" is used most often in the report to confirm the relationship at a high level of priority. Non-inclusion of existing projects implies that the task of external support is completed or is not proving highly productive. Institutions are placed in the "second" category when they are expected to qualify at a high level of priority but would merit attention second in sequence or only after specified preconditions are fulfilled.

Throughout the three Arab subregions, external assistance is more acceptable from non-governmental or international organizations than from prominent bilateral government sources. Specific institutional recipients are usually willing to make plans and conduct relationships in a realistic and responsible non-political manner, but neither they nor the external agencies

can completely avoid bilateral encounters at a political level that interfere with continuity and dissipate resources. In the interest of good institutional development it is desirable to protect the flow of governmental assistance by placing it under international administration, including in this category private as well as United Nations or regional agencies. The same cautions apply in the Iranian and Turkish subregions, but with less force since their international relations are not as closely tied to the Arab-Israeli question, and this is the area that most often confounds otherwise separate issues.

Where local governments have abundant revenues, as in the oil producing states, external assistance need not be primarily financial. External agencies can provide for technical consultation and participation in projects by foreign experts. They may advise on how local resources can be used. Institutions financed by oil revenues can be developed that serve populations in a larger group of countries in the region than the oil producing states themselves. Such an approach serves the interests of the oil producers by cementing alliances with other countries in the region, and it serves their joint interest by leading to better understanding and policy relative to population questions.

Maghreb

The Maghreb consists of Algeria, Tunisia, and Morocco. The most dynamic country and the one most likely to become the leader in demographic training and research is Algeria. Favorable elements of the situation in Algeria are economic strength, positive development policy, and emphasis on education. Approximately one-fourth of current operating expenditures of the government go to education. Officials who speak for Algeria on questions of population policy have said that demographic processes are not an important

aspect of development. However, the Plan Ministry has meanwhile commissioned a major study to look at relationships between economic development and population growth including the consequences for particular economic sectors of demographic prospects. Also, there exists a modest program of public assistance to women to space children and to improve the mother's health, which could be expected to facilitate fertility reduction. The consequences will be there no matter what the public pronouncements say. Analysis of realities is as important as attention to rhetoric. The relationship of demographic processes to public policy is one such reality, and a remarkably high level of interest exists among academics and statistical office officials. If Algerians invite cooperation in institutional development, the most promising locations would be the following:

First priority: The Secretariat of State for Planning includes the Directorate of Statistics with offices in Algiers and Oran. These two units could develop a major capacity for research and service to the policy-making process. The Directorate of Statistics has demonstrated through the Algerian Demographic Survey and additional projects a capacity to collect and present significant demographic information when assisted by foreign consultants and resident advisers. For the future, two major objectives could be envisaged: (1) to select projects on the basis of their direct contribution to demographic-economic questions in social and economic planning; and (2) to train middle and high level Algerian social scientists for demographic analysis by providing foreign training and guided experience in the research projects of the Secretariat for Planning.

The continental pattern of separating research from postgraduate professional training and assigning the former to public organizations (in this instance the Secretariat for Planning), prevails in Algeria. The emphasis on

higher education in Algeria is strong, however, and it would be worthwhile to help create modest research capacities at the universities where they would reinforce and upgrade the quality of postgraduate training.

Second priority: At either the Universities of Algiers or Oran, a strong social-science related program in demography with indigenous staffing could be envisaged. At both places, positive beginnings have been made. Algiers has the advantage of greater size and facilities. Oran has the advantage of proximity to the statistical office of the Secretariat for Planning that conducts the census, vital registration, and special demographic studies (e.g., Algerian Demographic Survey). Both universities recently began to offer a license in demography, and before that gave a Certificate. This expansion could, under suitable conditions, attract an increased supply of faculty and provide training in combination with social sciences. However, if managed with different aims, it might encourage only a narrow form of statistical demography capable of producing technicians for the statistical offices. If university policies and leadership emphasize the former, and if external resources are sought by individual staff members for projects or by the program as a whole, the elements of a promising institutional development situation would be present.

The detailed country reports on Tunisia and Morocco indicate additional potentials for research. They also point to limited technical training in government agencies. In Morocco, as in Algeria, agencies of the Secretariat for Planning are promising locations for demographic and related social science research. The institutional development program of the National Institute of Statistics and Applied Economics (INSEA) may soon culminate in an institution of higher education open to Moroccan and foreign students. Assistance by provision of consultants for specific research or training functions, and foreign training for staff development, would deserve high priority if requested from Morocco.

Eastern Arab Countries: Egyptian Sector

The subregion of Eastern Arab Countries, designated as the Egyptian Sector, includes Libya and Egypt. The former is neglected in this report because of its small population size and limited educational development. Egypt is of central importance in Arab training and research, both to provide for its own needs and because of the demonstration effect and service relationships it has with other countries.

The Cairo Demographic Centre (CDC), an institution chartered jointly by the United Nations and the Arab Republic of Egypt, provides solid training in demography up to a junior professional level. The CDC produces approximately fifteen graduates per year suitable for employment as junior demographers. On an average, two receive an M.Phil. qualifications and thirteen a two-year postgraduate diploma qualification. The training program is well established and results are cumulative. About 40 percent of the graduates at the junior professional level are employed in Egypt, 40 percent in other Arab countries, and 20 percent elsewhere in Africa.[3] Success in this type of training merits continuing support and reinforcement because it is providing good products and is a unique source of supply in these Arab subregions.

The Egyptian university system also provides limited postgraduate training at the Institute of Statistical Studies and Research (ISSR) of Cairo University, Geography and Sociology Departments of Ain Shams University, Faculty of Economics and Political Science of Cairo University, Sociology Department of

---

3. Omitted from this account are graduates of the one-year technical course of CDC that produces approximately thirty persons per year. See S.A. Huzayyin, "Cairo Demographic Centre: Its Role in Training and Research," paper presented to meeting of the International Union for the Scientific Study of Population, Liege, 1973.

Asiut University, and the Institute of National Planning. In addition to course offerings population topics are elected in thesis research. The latter provides a means for limited postgraduate training at such universities as the American University in Cairo. Present opportunities for students are scattered and not very effective in creating well-rounded specialists. Plans to transcend these scattered efforts by a concentration of faculty, students, and research facilities in a single center devoted to demographic and social science aspects of population have been made at ISSR, Asiut, Elazhar, and the American University of Cairo. All have failed to materialize or have been deferred. Therefore, so far as training is concerned, Egypt has the CDC with relatively narrow specialization in demography and no major concentration of talent or capacity for linking social science training with population.

Research capacities are similarly underdeveloped. Possibly the most important task to which new research capacity in Egypt could be addressed is assessment of the overall relationship of population processes, population policy, and development. The purpose of such a research capacity would be to develop a scientific understanding of alternatives open for social and governmental choice. The ideal institution to support such a research capacity is one not too closely controlled by the implicit assumptions of current government policy, or, on the other hand, one that maintains independence at the cost of restricting research to inconspicuous or strictly technical questions.

The Social Research Center at the American University of Cairo has developed a capacity for data collection and analysis, but keeps strictly to social processes that are inconspicuous from a policy point of view or are related to small population groups. The Demographic Projections Project, also located at AUC, develops computer software and offers computing services that

are useful, but similarly do not address substantive scientific questions. At the Institute of National Planning, nearness to government in an institutional sense appears to prevent significant research that can lead to policy improvement by raising questions. In the early 1970's, it was anticipated that the Institute of Statistical Studies and Research would be able to follow an independent policy and develop a body of research expertise which could be applied to problems of national development and population policy. The ISSR has made several starts in this direction but has not so far succeeded.

First priority. Egypt has a number of talented social scientists and demographers as well as a certain amount of supporting infrastructure. Full-time professionals and money could help to initiate a new pattern of utilization. It is suggested that two or three resident social scientist-demographers be appointed in Egypt and be supported by a small grants program. Research funds must be allocated primarily to salary costs for investigators. At present, competent persons allocate their time over three to four jobs simultaneously, each employment relationship receiving attention to the extent rewarded by income. In order to obtain research results there must be adequate salaries for professional scientists.

Joint Egyptian and foreign management of the grants component of the program would be necessary. Foreign participation would help assure that considerations of productivity rather than equity are kept uppermost. Resident foreign scholars would also be able to contribute at a technical level and help to develop a consensus about the role of scientific research in understanding policy choices, evaluating results, and modifying the future course of public action.

The specification of universities or institutes to host resident

scientists would necessarily come only at the stage where there is Egyptian initiative. The grants program could be established on a broader regional basis than Egypt alone, covering such an area as the entire group of Eastern Arab countries plus Sudan. A larger scale than Egypt alone would maximize demonstration effects and allow a greater degree of role separation among those within the region who review projects, those who make decisions to allocate funds, and those who receive support.

Second priority. If the first priority is implemented, it will lead to the identification of university centers and institutes that are more successful than others in assuming research leaderships as judged by output in addition to plans. Wherever research develops well, that place is likely to provide a good environment for postgraduate training. Advanced study includes learning how to make scientific inquiries. A more satisfactory state of postgraduate training would be approached by starting with the first priority and then coming to this one.

At such times as university development for training is undertaken, staff training will likely be most important. Two avenues of training suitable to Egyptian conditions are suggested: a type of "add on" training in which highly qualified social scientists are supported for special training in demography for periods of six months to one year; and participation in research on a team basis at major world centers. The former is best implemented by fellowship support and the latter by funding visiting positions at centers that can extend suitable invitations.

Eastern Arab Countries: Peninsular Subregion

The Peninsular group of Eastern Arab Countries includes Lebanon, Syria, Iraq, Jordan, Saudi Arabia, Yemen Arab Republic, People's Democratic Republic of Yemen, Kuwait, Arab Emirates, Oman, Qatar, and Bahrain. Only Iraq, Syria, Saudi

Arabia, and the Yemen Arab Republic exceed five million persons in size. The movement of students, professional personnel, and information within the subregion is not entirely free, but is unencumbered enough to create a high level of interaction. Money and students from one place flow to institutions in another; e.g., students from all over the region attend universities in Beirut. Or research is done in one country financed by funds from another; e.g., at the Royal Scientific Society in Jordan on certain projects funded by Gulf countries. Or money available in one place attracts staff from others to establish an institution; e.g., the Universities of Kuwait and Saudi Arabia with their numerous foreign professors.

A population center for every country in the subregion would not be feasible because of limited clientele and limited scholarly infrastructure. Hence, location at one or two places is more desirable. In the forefront of locations is the city of Beirut where valuable but limited teaching of demography at the undergraduate level is available in three universities. At the Lebanese University an ambitious program in demography was initiated, but for reasons related to the university as a whole, it has not developed beyond the temporary employment of a foreign demographer and part-time teaching by a Lebanese. At St. Joseph University, a demographer from the Population Office of the Economic Commission for West Asia offers the undergraduate course. At the American University of Beirut (AUB), an American sociologist with limited formal background in demography offers an undergraduate course and, in the School of Public Health, another person offers a single graduate course in social demography.

Beirut presents a classic picture of useful initiatives but no coordinated effort at one institution to create the necessary minimum of social science interaction with demography. It is doubtful whether there is even sufficient teaching by specialists at the undergraduate level to recruit outstanding social

science students and screen them for recommendation to postgraduate institutions abroad in the field.

The presence in Beirut of the Population Office of ECWA is a most valuable resource. It conducts technical assistance activities throughout the region and holds frequent specialists' conferences, all of which would provide excellent intellectual support for university faculty in population. In the Lebanon there are recent labor force, migration, and fertility surveys that provide a wealth of material for research studies. Other advantages of Beirut are the opportunities for university service in other countries of the region, its attraction to students as a university center, and its excellent international contacts. The situation would appear ripe for a coordinated initiative at one of the universities.

Inquiries in the region among staff and postgraduate students have indicated an unfortunate image for demography in one respect. As a specialty on its own, it is seen as statistical training for subsequent careers narrowly confined to government statistical organizations. In order to open career opportunities in planning, health, education, social security, and myriad other fields, demography should be developed as a specialization allied to, or "added on" to economics, sociology, urban planning, and other social science fields. In Lebanon, and in the subregion generally, students are keenly aware of the small scale of all professions, a fact related to limited population size, and they consciously prepare themselves for a competitive professional environment.

First priority. For demographic-social science training, accompanied and supported by faculty research, the American University of Beirut appears to be the strongest candidate. Its assets include good social science faculties and a flexible ability to administer special programs and research projects. The School of Public Health is also a source of strength in the related fields of nutrition, fertility, and biostatistics. What is lacking are long-run prospects

for financial self-support as a private institution, a factor that makes every new departure precarious. However, new wealth in the region may enable special programs to attract special funding. If initiated and conducted on a basis that includes service to countries of the region its prospects might be enhanced. Leadership for the faculty in demography and for the development of a coordinated plan of action was also lacking at the time of the survey, but its provision could be a principal aim of external assistance. Alternatives to AUB should be considered if necessary.

Second priority. Outside Lebanon, two locations, either or both of which would justify high priority consideration, are the University of Jordan and the University of Kuwait. At the University of Jordan, undergraduate courses taught by a Jordanian geographer in demography and population problems have attracted national attention and could provide a nucleus of experience on which to develop a multidisciplinary approach. The United Nations Fund for Population Activities is considering a proposal. External initiative to provide a faculty member who could show the way for participation by several disciplines, followed up by staff training, preferably of persons already holding Ph.D.'s in their own field, could lead to a critical minimum quantity of staff involvement in three or four years time. The Jordanian professionals seek employment outside Jordan but within the Arab world almost as much as within their own country. Thus, training at the University of Jordan contributes directly to manpower in the subregion as a whole.

The University of Kuwait is well financed and employs a high proportion of foreign staff, many of whom are Egyptian. Kuwait is the leading country in the Gulf region in educational standards, quality of statistics, and research facilities. A Swedish demographer offers courses at the Arab Planning Institute, an institution sponsored by Kuwait

for regional training and research studies. The university could relate demographic training and research to the preparation of graduates for statistical service and social science careers in the Gulf countries. From the standpoint of population size, the area does not command attention, but as a place where one of the most unusual demographic-economic phenomenon in the world history is being acted out, there is great scientific potential for research in Kuwait. The cost of cooperation in institutional development for external scientific agencies presumably would be modest.

At a lower order of priority, demographic training potentials in Syria may be noted. The Central Bureau of Statistics has led the field in Syria, aided by cooperation from Egyptian sources for foreign training and expertise, in particular the Cairo Demographic Centre and the Demographic Analysis Project of the American University in Cairo. Little is known about current university conditions in Iraq. At another potential location, the University of Riyadh, a sufficient basis in the social sciences does not yet appear to exist.

Iran

The population size and the capacity for public funding of the Iranian subregion justify not less than two major centers for demography and related social sciences. Government policy as expressed by the Plan and Budget Organization favors consideration in development planning of demographic factors. Specifically included is support for fertility control programs and policies to distribute economic investment and population among a large number of urban centers as a counter to concentrated urbanization in a few places.

Priorities for institutional development in Iran are strongly conditioned by initiatives already taken. The following ordering reflects these commitments.

First priority. At Pahlavi University in Shiraz, the Department of National Development and Social Studies has undertaken a major program for demographic training with intentions to develop a research program as well. Two full-time Iranian faculty members have recent Ph.D.'s with specializations in demography, and four of the foreign staff have also had training in this field. A senior Iranian faculty member is currently obtaining postdoctoral training in demography at Duke University on a Population Council fellowship. The department prepares five-year B.A. graduates for service in nation-building activities. All are qualified to communicate in both English and Farsi.

The undergraduate program is already well established. Future needs are for coordinated expansion in cooperation with economics and other social sciences in the direction of professional postgraduate and research training. At either the fifth year undergraduate level or in conjunction with an M.A. level course, modest research projects could be introduced. Supplementary university infrastructure combined with funding and consultation, some of which could come from external sources, would be helpful to establish a research capability in the staff of the university. The university's emphasis on regional and nation-building activity would provide a useful focus for demographic studies.

Second priority. A strong center is needed in Tehran to meet the demands of the nation's capital, but thus far it has not emerged. An accessible location where the social sciences are relatively strong is the University of Tehran. The Department of Demography in the Faculty of Social Sciences and Cooperatives has concentrated on a type of training that is suitable for technical personnel in government offices. It is suggested that the Institute for Social Studies and Research (ISSR) of the university has greater immediate potential for contributing to policy and analysis. The institute provides a flexible

multidisciplinary base for faculty and special staff. It can propose, fund, and carry out research projects. Strengthening of the institute's scientific relations with foreign sources of expertise would be a practical means for encouraging this institution's development of capacity in population.

In 1973, an advisory mission from the Population Council recommended to Tehran University that the strength of fully-trained staff in the Department of Demography be increased to five persons. This would require funding and not less than five years of development. Thereafter, multidisciplinary cooperation in postgraduate training and research involving the Department of Demography could be considered. If in the meantime the ISSR builds its own capacity in this field, there is much to recommend economy in the number of institutes and close collaboration by the Department with the ISSR.

Turkey and Cyprus

The Turkish population of nearly 40 million persons is probably the most diverse in demographic processes of all national populations in the Middle East and North Africa. At least 25 percent of the population live in eastern areas where birth rates exceed 45 per thousand and another 25 percent in western areas where rates are below 30 per thousand. Turkey's economy has advanced rapidly in recent years, regularly yielding rates of growth in real output of 7 percent per year. More than 1.5 million Turkish workers and family members are living in Europe, contributing remittances to the Turkish economy of 1.5 billion dollars per year. In order to respond to rapid urbanization, international movements of workers, and to an overall population growth rate of 2.5 percent per year, the policymaking process needs to be informed by understanding of the population and development relationship.

A distinguished initiative to this end was taken when the Hacettepe Institute of Population Studies was founded in Ankara in 1967. Its first director built an institution capable of graduating approximately ten 2-year M.A. graduates per year and conducting significant population research in the social sciences. Graduates of the institute are currently serving as evaluative directors for Turkey's two largest family planning projects in Yozgat and Ankara provinces respectively. Other graduates are employed in the Demographic Survey Unit of the State Institute of Statistics, as chief demographer for the Istanbul Metropolitan Planning Bureau, and as experts in the national planning organization.

Early studies published by the institute include a book on Turkish demographic information, articles on levels and trends in birth control practices (including abortion), and evaluation reports on health and family planning programs. Much of the research was based on field studies, including a national household survey conducted by the institute in 1968.

The original plan for institutional development at Hacettepe included a foreign fellowship program to train staff at the Ph.D. level for the institute and, to a more limited extent, for other educational and research institutes in Turkey. It was funded by the Ford Foundation. Although there was a change in the directorship of the institute in 1972, this plan was largely adhered to. The change in scientific leadership of the institute caused a deterioration in research output for about two years. Meanwhile, fresh staff have been returning from advanced training abroad, and prospects for renewed research output in 1975 and later are good.

The Hacettepe experience shows that institutional development is protected and enhanced if multi-year plans are made early in the process and funded both locally and externally on a long-term basis. The Hacettepe development

has been in progress seven years and will require at least two more years before the institution can be considered safely established. One reason for the length of the process was the nonexistence beforehand of a strong social science environment at Hacettepe. The University and the Ford Foundation took the view that the social sciences would be aided by the institute and would develop together. This expectation has gone largely unfulfilled. The strongest social scientists are drawn to the institute or to other universities, leaving the social science disciplines to be staffed at a lower level of competence. The reasons for this result lie in the strongly medical orientation of the Hacettepe University, a factor which cannot be overcome by the presence of the institute alone.

For the future, a wider distribution of training and research capacity than that provided by Hacettepe is required in Turkey. Rather than seek to establish a second major center, integration with strong social sciences and statistical services wherever they are located appears the most promising avenue of approach. Hacettepe will undoubtedly remain the principal source of expertise, but complementary developments elsewhere would add depth to the supply.

First priority. The City and Regional Planning Department of Middle East Technical University in Ankara, and the Faculty of Social and Administrative Sciences at Bosphorus University in Istanbul, are highly competent units, both of which are already involved in a small way in research on population. With encouragement by research grant support and professional interchange between themselves and demographer-social scientists abroad, both of these institutions could become important locations for knowledge creating activity. The aim of institutional development in both instances would be to infuse the curriculum and research of the faculty with concentrations on demographic interrelations.

Second priority. Of equal urgency is to support the development of

analytic capacity in the State Institute of Statistics. The institute, with assistance from USAID and the Population Laboratories program of the University of North Carolina, initiated in 1974 a national demographic data system. It is based on a sample of approximately 15,000 households that will be kept under continuous observation and rotated as necessary to maintain representative quality. The statistical system allows social and economic data to be collected periodically from the same sample. The potential value of these statistics, and particularly of the data files at the level of individual records for policy-oriented research, is great. The main results will be published, but a direct and more rapid input into policy organizations of the government is also feasible if analytic capacity is developed in the Demographic Survey Center of the State Institute of Statistics.

Such an analytic capacity would enable SIS to plan questionnaires on behalf of government agencies and to provide results to them promptly in useful form. It is all too common that "wrong" questions are asked, or valuable information is lost by "wrong" classification and tabulation. An analysis staff at SIS could act as intermediary between policy analysts and data gatherers to increase efficiency of the system. SIS has plans for institutional development for this purpose that merit support at a high priority level.

BLANK PAGE

Chapter 4

REPORT ON INSTITUTIONAL DEVELOPMENT IN DEMOGRAPHY AND RELATED SOCIAL SCIENCES

SOUTH AND EAST ASIA

POPULATION CONDITIONS AND DEVELOPMENT STATUS, 1974

As they enter the last quarter of the twentieth century, the countries of East Asia and South Asia vary widely in both population trends and in their awareness of and interest in their population conditions. In terms of absolute size their estimated populations range from more than 600 million persons in India and over 800 million in China to 2.4 million for Singapore and perhaps 1.5 million for Mongolia. Indonesia and Japan both already exceed 100 million and Bangladesh is approaching 75 million people. The Khmer Republic, Malaysia, Laos, Sri Lanka and Nepal will still have fewer than 15 million inhabitants each in 1975. Population figures for these and the remaining countries of the region are shown in Table I.

The separate nations also vary in the rate at which their populations are growing. This rate is determined largely by the difference between their birth and death rates, since net international migration is no longer an important component of size changes in any of these countries under normal circumstances. Unfortunately, vital statistics are of poor quality or even unavailable in several South Asian and East Asian states including such large and important countries as the People's Republic of China, India, Indonesia, and Bangladesh. They are, however, usually considered to be of good-to-excellent quality in Japan, Republic of China, Malaysia, Singapore and Sri Lanka. The official figures or the best available recent estimates show a range of rates of growth by natural increase from 3 percent or more in Bangladesh, the Philippines, Mongolia, Pakistan, and Thailand (and possibly the Khmer Republic) to around 2 percent in several countries, including the Republic of Korea, the Republic of China, the People's Republic of China, Singapore, and Sri Lanka. Birth rates, death rates, and rates of natural increase for the countries of the region are shown in Table I.

TABLE I

POPULATION DATA, LATEST YEAR(S), COUNTRIES OF SOUTH AND EAST ASIA

Country	(1) Total population and mid-year	(2) Crude birth rate and year(s)	(3) Crude death rate and year(s)*	(4) Rate of natural increase and year(s)*
Bangladesh[a]	72,000,000 (1973)	49.0 (1973)	19.0	30.0
Burma[b]	27,580,000 (1970)	40.3 (1965-70)	17.4	22.9
China[b,d]	787,180,000 (1971)	33.1 (1965-70	15.3	17.8
India[a]	575,500,000 (1972)	41.6 (1972)	16.0	25.6
Indonesia[a]	126,700,000 (1972)	46.0 (1972)	19.0	27.0
Japan[b]	104,660,000 (1971)	19.2 (1971)	6.6	12.4
Khmer Republic [a or b]	7,350,000 (1973)[a]	44.6 (1965-70)[b]	15.6[b]	29.0[b]
Korea (North)[b]	14,280,000 (1971)	38.8 (1965-70)	11.2	27.6
Korea (South)[a or b]	31,920,000 (1971)[b]	31.0 (1971)[a]	9.0[a]	22.0[a]
Laos[a or b]	3,030,000 (1971)[b]	48.0 (1972)[a]	21.2[a]	26.8[a]
Malaysia (West)[b]	8,980,000 (1971)	33.8 (1970)	7.3	26.5
Mongolia[b]	1,280,000 (1971)	41.5 (1965-70)	11.2	30.3
Nepal[b]	11,290,000 (1971)	44.6 (1965-70)	22.9	21.7
Pakistan[a]	65,500,000 (1973)	46.0 (1973)	16.0	30.0
Philippines[a]	41,500,000 (1973)	45.0 (1973)	11.5	33.5
Singapore[b]	2,110,000 (1971)	22.8 (1971)	5.4	17.4
Sri Lanka[b,c]	12,510,000 (1970)	29.4 (1970)	7.5	21.9
Taiwan[e]	15,500,000 (1973)	23.8 (1973)	4.8	19.0
Thailand[a]	39,500,000 (1972)	41.5 (1972)	10.0	31.5
Vietnam (North)[b]	21,600,000 (1971)	37.5 (1965-70)	16.1	21.4
Vietnam (South)[a]	19,750,000 (1971)	40.0 (1971)	16.0	24.0

a. These are rounded estimates by the author based on various documents. See "Sources" below.
b. Data from the United Nations, Demographic Year Book, 1971 and, except for Japan, Malaysia, Singapore, and Sri Lanka, reported to be "of questionable validity."
c. Formerly Ceylon.
d. People's Republic of China.
e. Republic of China, official figures.
* Rates for year(s) shown in column 2.

Sources: Demographic Yearbook, 1971 (New York: United Nations, 1972), Table 3 (pp. 127-128), and Table 4 (pp. 134-135) except Bangladesh, India, Pakistan, Philippines, Taiwan, and Thailand, for which estimates were constructed on the basis of Dorothy Nortman, "Population and Family Planning Programs: A Factbook," Reports on Population/Family Planning: 2 Fifth Edition (September 1973), Table 4 and various country reports and statistics. That for Bangladesh is based on Masihur Rahman Khan, "Bangladesh Population During the First Five-Year Plan Period (1973-78): An Estimate," The Bangladesh Economic Review 1-2 (April 1973), p. 196.

The combination of relatively large base populations and high rates of increase have the greatest potential for adding to the world's population in a given period of time. But countries with comparatively small base populations and limited usable land areas will also face problems of meeting rising demands for employment, education and health services and for increasing incomes per capita. These complex situations are not, of course, properly viewed simply as "population problems." They are fundamentally resource and organizational problems. Quite different effects of similar population factors can and do occur depending on the specific pattern of social and economic organization a country develops. On the basis of the population situation in Japan in 1945 alone, economic development by the mid-1970s would have been predicted at levels far below those actually achieved. Clearly, the moderately high birth rates and rates of population growth in Japan, a country with the highest density of any in terms of the ratio of population to arable land, did not prevent rapid and very substantial economic growth. In the process both fertility and mortality came under control. Cause and effect are interwoven here and difficult to separate. It is reasonable to hypothesize that population changes promoted economic changes and that the reverse was also true in a reciprocal relationship.

It is apparent, however, that improvements in the economic and social well-being of the peoples of most economically less developed countries are not easily won and that the Japanese experience cannot be widely replicated. A few nations may happen to possess large supplies of natural resources which are in great demand in the industrialized countries. A smaller number may have locations which for the moment are strategic for the building of commerce and light industry. In the short run, quite high rates of both economic and population growth are possible under such conditions. But the weight of the evidence is that rapid rates of increase in numbers make it more difficult to attain development goals under the conditions which prevail in the great

majority of the countries of Asia today. Since it is patently false, it is not necessary to argue that no economic nor social gains can be achieved in these countries. It is enough to recognize that under any foreseeable conditions their continuing population growth is assured for some decades to come and that declining fertility and natural increase are favorable, and ultimately necessary, to the more rapid achievement of higher levels of economic growth and presumably of social development as well.

Government concern with population trends in Asia is a recent development. It is primarily a concern with rates of population increase well beyond earlier expectations and high enough to jeopardize government planning and to alarm responsible government officials. This is, of course, too limited and unsophisticated a view of the population factors which need to be dealt with in development planning. Nevertheless, rapid growth was the condition first identified as a population problem in India in 1952, in Pakistan in 1960, in South Korea in 1964, and by both Chinas, Indonesia, Malaysia, Nepal, the Philippines, Singapore, Sri Lanka and Thailand during the following ten years. New and more reliable censuses and population surveys produced inescapable evidence that population was growing more rapidly than almost anyone had expected. Such evidence threw into jeopardy the planning goals of an increasing number of countries.

In point of fact, rapid growth continues to be the most severe population difficulty confronting both the economic and social planners and the peoples of the Asian countries. It is already impeding, or threatening to impede, the raising of the standard of living which presumably is a goal of development planning. The difficulty, of course, is not simply that population is growing rapidly in every country in the region (except Japan) but that the rates of population growth have been increasing and that they must be applied to base populations which have reached levels substantially in excess of anything known at the time of the expansion of European peoples during the

Industrial Revolution. In addition and contrary to conditions prevailing in the earlier period, the migration of substantial proportions of a country's growth to unsettled parts of the globe is no longer possible. The demographic transition in Europe was a gradual process with quite small additions to total population in any particular year or even decade. Increases in numbers of this magnitude were readily absorbed in most cases by the expansion of employment opportunities which overlapped or even tended to outrun population growth.

In contrast, the statistics in Table II illustrate the profound surge in rates of population growth in most Asian countries, beginning especially in the 1950s and continuing at high levels since that time. In a few countries in the region, notably the Republic of China (Taiwan), the Republic of Korea (South Korea), the Republic of Singapore, and apparently the People's Republic of China, recent years have seen declines in fertility. But in the majority of the less developed countries in Asia, fertility rates remain high, and rates of natural increase are probably still edging up. In the near future, death rates that are already low can be expected to remain so. But in those countries where sizeable further declines in mortality are clearly possible, such as India, Bangladesh, and Indonesia, sharper drops in fertility will be necessary to prevent a more rapid rise in natural increase. The suggestion that international migration can occur on a scale necessary to check the total population growth of these countries is not a realistic one. The balance between births and deaths will largely determine the amount of population increase in the countries of Asia for the rest of the century. Over that period the probability of continuing growth is strong for every country though rates of growth can be expected to vary, perhaps markedly. Indeed, unless current fertility levels decline, and decline with some speed, the absolute numbers in a given nation will rise with any improvements in the expectation of life.

In terms of numbers it is likely that the population of South Asia

TABLE II

TOTAL POPULATION AND RATES OF INCREASE, ALL LESS DEVELOPED COUNTRIES, EAST ASIA AND SOUTH ASIA, 1900-1980

Identification	1900	1940	1950	1960	1970	1980
Total population (in millions)						
Less developed countries[a]	1,088	1,474	1,628	2,005	2,542	3,247
East Asia[b]	453	562	573	686	825	977
South Asia[c]	412	572	653	806	1,048	1,380
Southeast Asia[d]	101	150	173	218	286	380

	1900-1940	1940-1950	1950-1960	1960-1970	1970-1980
Increase in population (in millions)					
Less developed countries[a]	386	154	377	537	705
East Asia[b]	109	11	113	139	152
South Asia[c]	160	81	153	242	332
Southeast Asia[d]	49	23	45	68	94
Rates of population growth					
Less developed countries[a]	0.8	1.0	2.1	2.4	2.5
East Asia[b]	0.5	0.2	1.8	1.9	1.7
South Asia[c]	0.8	1.3	2.1	2.7	2.8
Southeast Asia[d]	1.0	1.4	2.4	2.8	2.9

a. World total.
b. China, Hong Kong, Mongolia, North Korea, South Korea.
c. Afghanistan, Bangladesh, Bhutan, Brunei, Burma, India, Indonesia, Iran, Khmer Republic, Laos, Malaysia, Pakistan, Philippines, Singapore, South Vietnam, Sri Lanka, Thailand.
d. Brunei, Burma, Indonesia, Khmer Republic, Laos, Malaysia, Philippines, Singapore, South Vietnam, Thailand.

Source: World Population Prospects as Assessed in 1968 (New York: United Nations, 1973). Figures for 1970 and 1980 are the medium variant projections.

will grow from an estimated 412 million at the beginning of the twentieth century to around two billion at its close; that the 100 million people of Southeast Asia will become some 600 million over the same period; and that in East Asia (excluding Japan) the comparable growth will be from something over 450 million to around 1.25 billion. Future populations will be less than these projections indicate only if growth rates decline after the 1970s more rapidly than has been assumed here. But at least during the rest of the present decade, it is probable that high rates of population growth will continue almost everywhere in Asia.

This prediction rests on the expectation that limited declines in birth rates will be roughly offset by further declines in death rates, and more broadly, that substantial reductions in fertility will occur only in the context of a development structure which is not yet widely apparent and which will require substantial modifications in the economies and societies of most of the countries if it is to be achieved. This does not imply, however, that declines in birth rates will not begin or accelerate, particularly in the countries which actively push ahead with both family planning services and population planning as a part of development planning.

It must be recognized, however, that the "population problem" facing the countries of Asia to varying degrees is not simply one of rapid growth. The distribution of a country's residents is increasingly a maldistribution. In particular, urban areas have been growing since the 1920s at accelerated rates, which frequently have been two times or even more the rate of growth of the population as a whole. High growth rates reflect the generally high fertility levels in most of the Asian countries, but to this must be added the net migration which characterizes most of the urban places and particularly the larger cities. In 1920 in all of southern Asia, from India and present day Pakistan through the Philippines, there were only two cities, Calcutta and Bombay, with more than a million residents. By 1940 there were three such

metropolitan cities, by 1950 there were nine, by 1960 the number had jumped to 16 and, by 1970, to some 22 places. For all of Asia from Pakistan to North Korea (except Japan and the People's Republic of China) the number of million-plus agglomerations in 1970 was 25.

Almost every Asian country faces major difficulties in providing housing, schooling, employment and various amenities to ever-increasing numbers of urbanites. Furthermore, their demands for such services tend to be greater both quantitatively and qualitatively than are those of the rural population. In these and other ways, the growth of cities, and particularly the growth through migration from the rural, largely agricultural,sector, presents substantial problems both for economic and for social development. In fact, despite the visible modernization of parts of most large Asian cities, the majority of their inhabitants are not sharing in either the economic or social benefits of development. Poverty, and the conditions which cause it, are increasing.

Nevertheless, the countries of Asia remain overwhelmingly rural, with the exceptions of Singapore and Hong Kong and, to a much lesser degree, of South Korea and Taiwan. In India, for example, despite the 11 metropolitan cities of a million or more population in 1970, more than four-fifths of the people are rural. This places on planners a heavy burden of developing agriculture without displacing additional percentages of the growing rural populations, who then migrate to the cities where the surplus must somehow be absorbed. Within rural areas too the distribution of people is often uneven and uneconomic, and the increasing density is resulting in greater use of poor agricultural land. Social and political problems based on close contact of different tribal, religious, or other groups are increasing as demonstrated by recent clashes between Muslims and Christians in Mindanao, which are related to economic as much as to cultural differences.

The considerations briefly touched on here indicate that the absolute size of a population, its distribution, rate of growth, and composition are all closely involved with economic and social development. This is a point which is stressed in the very notion of "development decade" promulgated by the United Nations. As yet, it has not been widely realized or made operational in the development plans of the Asian countries.

POPULATION PRIORITIES AND POLICIES

Simply because of their size, China, India, Indonesia, Japan, Bangladesh and Pakistan are all prime candidates for priority ratings in any list of countries in South and East Asia with population problems. As Table I shows, each has a current population above 65 million and all but the last two exceed 100 million. India and the People's Republic of China are, of course, the giants with estimated numbers of more than 800 million and 600 million respectively at the beginning of 1974. Four other countries contained between 25 and 50 million persons. These are Burma, the Republic of Korea, the Philippines and Thailand. North and South Vietnam taken together also fall into this middle grouping.

When the extent to which a serious population situation exists is viewed in terms of rapid rates of population growth, most of the countries of the region will be included. Those countries which maintained annual rates of increase of 2.5 percent would double their numbers in 28 years. In 1973 Bangladesh, India, Indonesia, the Khmer Republic, North Korea, Laos, Malaysia, Mongolia, Pakistan, the Philippines and Thailand all had growth rates at least this rapid, and in all probability Burma, North and South Vietnam and perhaps Nepal (for which rather high crude death rates have been reported) would also be included in this group if all vital events were known. In Bangladesh, the Khmer Republic, Pakistan, the Philippines, and Thailand population growth was estimated to be 3.0 to 3.4 percent annually, which would indicate a doubling of

population in 21 to 23 years if the growth rate remained unchanged. Only Japan had a rate below 1.5 percent and a consequent doubling time of over 50 years. If its estimated annual growth rate of 1.8 percent is approximately correct, the People's Republic of China is one of the presently less rapidly growing countries in Asia with a doubling time of some 40 years. It should be noted that crude death rates of 15 or more are estimated for China, Bangladesh, Burma, India, Indonesia, the Khmer Republic, Laos, Nepal, Pakistan and Vietnam (North and South). As these fall to expected lower levels, fertility will have to decline as rapidly or rates of natural increase will rise. Such a further drop in mortality seems likely in view of the fairly high infant death rates which still characterize all of these countries.

In terms of existing demographic conditions in South and East Asia, it might simply be concluded that the need for bilateral or international assistance to control growth is greatest in those countries which have the highest rates of natural increase. Other variables, however, must also be taken into account. One is the contribution of a single country to regional and world population growth. Interdependencies exist among peoples everywhere such that conditions in one area affect, and are affected by, conditions in both adjacent and more distant areas. From a national point of view, rapid population growth beyond an optimum level can be as serious for a small country with one million inhabitants as for a giant one with many times the area and the population. A smaller area and the more limited monies required to alter population trends, other things being equal, may appear to contradict this assertion. But larger countries tend to have more ample resources, greater international bargaining power, a surplus of educated, if not trained, manpower and other offsetting circumstances. In consequence, from a regional or world view the estimated rate of natural increase of 2.6 for India shown in Table I is indicative of a more serious population challenge than is the rate of 3.2 for Thailand. This is simply a reflection of the fact that in the short run a lower rate of increase acting on a larger base population will result in a

greater increase in numbers than will a somewhat faster rate of growth applied to a smaller total.

In the real world these two demographic conditions - absolute size and rate of change - quite obviously must be linked to other economic and social situations if they are to result in meaningful judgments about priority needs for assistance with population programs. So complex and numerous are these related factors and their presumably reciprocal linkages that even to identify and to chart them all appropriately is beyond present skills. Despite this, their general nature and importance can be deduced rather easily from some sample questions. For example:

-What proportion of the population is under 15 years of age?

-What proportion of the labor force is engaged in agriculture?

-What types of agricultural employment predominate?

-What is the per capita income?

-What is the mean school grade completed for the population under 15 or 20 years of age?

-What changes over the last five (ten, twenty) years have occurred in income, schooling, rate of natural increase and other variables related to social change and economic development?

It is when rapid population growth occurs in regions characterized by subsistence-agricultural economies, by low per-capita incomes, by limited years of schooling for child-heavy populations, by persistent high fertility in the face of substantial mortality declines, by generally inadequate social services, in short by economic and social deprivation, that high rates of population increase must be viewed as hindrances to the attainment of development goals. Stated differently the component parts of development are economic, social and demographic. There is no evidence at hand to demonstrate that individual components can change radically without parallel change in the two remaining parts with which our limited available evidence suggests they

are so intricately meshed.

Clearly, this view does not support the possibility that low rates of natural increase based on low levels of fertility and mortality can be instituted and maintained in the absence of economic and social development. With equal certainty, it does not accord with the assumption that substantial economic development can be achieved before parallel social and demographic development occur. The difficulty is one of achieving any large measure of economic growth and political stability in most contemporary Asian countries so long as there remains the necessity to meet spiraling social costs, fueled as these are by both rising numbers of recipients and rising expectations about the quality of such services. What we know of the history of social change only reinforces the conclusion that human organization is unwilling or unable to accommodate to ideas and operations which are dramatically out of line with the rest of the social fabric.

A further consideration is the view each country has of its population situation and the strength with which these views are being implemented by policy formation and program activities. Among the countries of South and East Asia at the end of 1973, Burma, Khmer Republic, Mongolia, North Korea and Vietnam had no specific policy to reduce rates of population increase and little or no support for family planning services. The balance of the countries in the area have all made the reduction of their rates of population increase an official policy and are currently providing family planning information and services, combined in some cases, with other efforts to implement such policies. Almost all of these activities represent recent decisions on the part of governments, taken between 1960 and 1970.

One indication of the views toward their population growth held by governments is the extent to which current trends are seen as requiring consideration in national development planning. A recent study examines references to population matters in the last available development plans of 70

countries.* These include 14 countries in South and East Asia. Ten of the latter (India, Indonesia, Malaysia, Nepal, Pakistan, the Philippines, Singapore, South Korea, Sri Lanka and Taiwan) have official national population policies aimed at reducing growth rates and all of these have development plans which give some recognition to population as a present or future condition requiring attention. Except in Nepal and Singapore, a policy for the reduction of population growth rates has been stated in these plans, and means of accomplishing such an end have been proposed most commonly through establishing or expanding family planning programs. In Singapore the desirability of a further reduction in the rate of population increase is indicated in the 1961-1964 plan examined, but no government action to accomplish this is suggested. In Nepal the 1965-1970 development plan does not discuss population matters in any specific terms. The four remaining countries surveyed by Stamper include three - Burma, the Khmer Republic and apparently Mongolia - in which the government neither has a policy to reduce fertility levels nor supports a family planning program. Not surprisingly, in none of these countries are population policies or programs discussed. It may seem surprising, however, that the latter is also true for Thailand's 1967-1971 development plan. The apparent explanation is that Thailand's government supported family planning programs on an increasing scale but without publicity of any kind for several years prior to 1970 when the Cabinet approved a Development Board proposal to reduce the country's rate of natural increase. Therefore, Thailand can now be included with the countries in the region positively concerned with population growth. Collectively, these contain all but a small proportion of the total population of the region if the People's Republic of China is included as it seems reasonable to do.

Recognition of a population problem and even support of a program intended to ameliorate it do not by themselves give any indication of the

*B. Maxwell Stamper, "Population Policy in Developing Countries: A Study of Seventy Less Developed Countries," Reports on Population/Family Planning: 13 (May 1973), pp. 1-30.

strength of a nation's commitment nor the success of its efforts. Commitment is obviously a characteristic which is difficult to measure without an intensive case study of a country by a knowledgeable reviewer. It is subject to change over time in any event. From a planning viewpoint, success of a program to reduce fertility presumably depends ultimately on the extent to which birth rates decline and the proportion of the decrease which can be attributed to program operation. But sharp drops in fertility cannot be expected within a short time, and except for India, no program has been in operation for as much as 15 years. For most, the effective period is under five years. And even where the basic data are available, evaluation of program effects is no easy task because of their complex interrelationships with other factors already discussed.

Beyond family planning, there are few programs in any Asian country operating for the direct purpose of controlling specific population trends. Indonesia has a long-standing policy of transmigration, the movement of people from heavily settled impoverished parts of Java to thinly settled areas of the outer islands. The scale of the program is entirely inadequate to meet any goal of redistributing the population of the country. In 1973 somewhere around 50,000 persons were moved from Java under this program. Population increase in the same period was in excess of one million persons. However, the program is also intended to initiate the development of new areas. It may also provide improved standards of living for individual families although there are signs that the subsidization of settlers has not been universally approved by their new neighbors.

In the People's Republic of China and in Sri Lanka it is government policy to provide health services, public education, roads, electricity and other facilities in rural areas to lessen the opportunity differential and standard of living between these sections and the urban centers. Although this policy is recognized as one which will lessen the rate of out-migration

from the rural areas, the policy in Sri Lanka is primarily political and social rather than demographic. Sri Lanka has also opened the Mahaveli area, a large open reserve, for settlement of poorer families on new farmsites, giving preference to those with large families. This too is only incidentally a population policy.

In a few instances where alarm has been expressed at the rapid growth and huge size of principal cities, policies (or at least regulations) have been adopted to halt further growth. Korea provides an illustration in recent orders which have (1) prohibited new industries or commercial enterprises from being set up within areas of the city of Seoul north of the river Han, (2) decentralized a number of government offices, particularly those associated with operations such as mining or steel manufacture taking place elsewhere, and (3) created an expanded metropolitan area. Jakarta is another officially "closed city." But generally the effects of such attempts to halt urban growth by fiat have been minimal.

One other program, which has been growing rapidly in Asia in the first half of the 1970s, is the introduction of population education in the schools. The inclusion of such materials in the curriculum is intended to provide students with an understanding of the population trends and policies of their own and other countries. The personal benefits of small families are generally emphasized as well. The program is thus one to provide wider support for the acceptance of family planning in the future. So far it is on an experimental or limited basis in those countries in Asia where it has been accepted. At the beginning of 1974 operating programs were most widespread in the Philippines, South Korea, and India. Strong interest also existed in Thailand, Sri Lanka, Taiwan, Malaysia, Indonesia and Iran.

The focus of efforts to deal with population then has been on the reduction of growth rates, and the principal instrument devised to secure lowered fertility or natural increase rates has been a government family

planning program. Although in Asia the initial impetus for such programs has come almost always from economic planners, the control mechanism has been in the hands of the health ministry or in one or two cases of a special family planning agency. Many -- perhaps all -- of these programs are so new that evaluation of their success would be premature. In any event, this is not the place to attempt such an evaluation. It may be noted, however, that in 1973 fertility rates were declining in both Chinas, Malaysia, Singapore, South Korea, Sri Lanka and possibly in Thailand. They nevertheless remain high in Thailand as well as in Bangladesh, India, Indonesia, Nepal, Pakistan and the Philippines. The programs commonly viewed as most successful are, in any event, those which are going forward with the support of a broader development program which is inducing modernization and increases in standards of living.

In a few countries government planning and development organizations are showing an increased awareness of the need to establish demographic competence in one form or another directly within their organizations. In Thailand a Population Unit has been set up within the National Economic and Social Development Board, and it has already played a direct role in the formulation of a population policy statement for inclusion in the country's development plan. In Malaysia a foreign demographic advisor is currently working with the Economic Planning Unit. In Bangaldesh the First Five-Year Plan calls for a population division within a ministry still to be determined. If the concept of population is not limited to family planning, the locus is likely to be the Planning Commission. In addition, a Population Studies Center within the Bangladesh Institute of Development Studies was established in 1974. In Indonesia the National Plan Organization (BAPPENAS) is headed by an economist-demographer, who is the author of an authoritative study of the population of Indoesia. However, the agency does not have a population unit nor even a demographer advisor directly within it. However, it has so far maintained contact with the Demographic Institute at the University of Indonesia and with the

Population Division of LEKNAS, the government institute for economic and social research. Similar informal arrangements between planning organizations and university faculty or population centers appear to exist in South Korea, the Philippines and perhaps elsewhere. Bangladesh and Pakistan each has a population group related to its development planning organization. So far as is known, however, the remaining countries in the region do not have population sections within their planning agencies. This indicates a failure tc comprehend the need to plan for future population conditions in detail rather than merely to react to the conditions which occur. One difficulty here is that most development plans are for a short time period, usually three or five years, and that population changes over such a short time are minor. The need is perhaps for long-range population planning, adjusted to and fitted into short-term development plans.

RESEARCH AND TRAINING IN DEMOGRAPHY: NEEDS AND FACILITIES

The sharp increase in concern for population matters in the Asian countries in the last decade or so has inevitably underscored the need both for better population data and for more competent analyses of the available population figures. Over the last few years there has also been increasing awareness of a point stressed at the Second Asian Population Conference held in Tokyo in November of 1972. There it was repeatedly suggested that population study and planning must be fully integrated with the broader study of the economies and societies of given countries.

If such a message is to be acted on, it is necessary to have an adequate supply of trained persons, of demographers with general social science competence and of economists, sociologists and others with specific training in demography. These are the persons who must train others, particularly for middle-level and junior positions in both government and private service.

These are the persons who must direct or personally carry out the research studies which governments and businesses need in managing the present and in planning the future.

The imbalance between manpower requirements and manpower supply is a fundamental problem in developing nations. A present need in many of these is for demographers and for other social scientists with population skills. However, the need itself has not been clearly recognized even yet in a majority of countries. Perhaps this is because the title of "demographer" is simply not understood or is far too narrowly construed. Perhaps it is because population problems have been mistakenly viewed as within the medical field. Perhaps it is because population situations have been seriously oversimplified, with the corollary that they could be competently handled by any intelligent administrator. Undoubtedly, there are other more general reasons, including the underdeveloped state of higher education in many countries and the priority accorded to day-to-day needs by operating agencies.

Whatever the cause, there is an evident lack of experts in the population field in Asia. This can be compensated for in part by the use of expatriates on either a long term or a visiting basis. Over the long run, however, it is difficult to view this as a satisfactory solution, particularly for the more routine posts in colleges, statistical organizations, planning ministries and other offices where a good grounding in population studies is needed, but not several years of advanced training. This argues for the development of national or regional population training programs to the Master's level initially. It is more economical and probably more useful in terms of future contacts and relationships with the profession for the smaller number of students who train to the doctoral level to be sent to already developed centers in other countries.

In Asia the great majority of persons who are now identified with demography have been trained abroad, particularly in the United States. There

have been individual courses in demography offered here and there in Asia for a good many years. But organized training programs in the field within the region have for the most part been started since 1960. Ordinarily these have been associated with a newly developed population research center established at a university. Such centers were established at the University of the Philippines in 1964, at the University of Indonesia in the same year, at Seoul National University in 1965, and at Chulalongkorn University in Thailand in 1966. A training program in population and development, begun in 1965 at Xavier University in the Philippines, was first related to the Research Institute for Mindanao Culture and transferred in 1971 to the Mindanao Center for Population Studies. In 1972 social science departments were added to a center begun in 1968 in the School of Public Health at Yonsei University, Korea. In 1973 a center at Mahidol University, Thailand, organized informally three years earlier, acquired university and government status. In the same year university-wide population centers were established at National Taiwan University and at Gadjah Mada University in Indonesia. As a result of a national training program, several other Indonesian universities also set up small population centers. In South Asia at least 11 such centers have been established at Indian universities, two in Pakistan and one in Sri Lanka. All of these engage to a greater or lesser degree in population research and most offer a master's degree in demography, sociology, economics, public health, or another discipline directly or through an established department. A one-year population training program leading to a certificate and a two-year program leading to a master's degree are given by the International Institute for Population Studies in Bombay. The Economic Commission for Asia and the Far East, a United Nation's agency in Bangkok with a Population Division, offers frequent training seminars but no degree programs. A few in-service training courses in which some lectures in population are given, exist in some statistical offices and other government agencies.

When the overall state of demographic training in Asia is examined, it can be concluded that, although it is expanding, coverage is still exceedingly thin. Only in South Korea, the Philippines, Thailand, Indonesia, and India is even one social science degree program available either in demography, or in a related discipline with a substantial population content. However, there are individual courses or papers on demography in dozens of universities although these are generally available only to students in one department or, at most, in one faculty. Some population content is introduced into other courses, such as Economic Development, Human Geography or Social Statistics. This can be helpful, but if, as is often true, the instructor himself has no competence in population, the students may be left with erroneous facts or interpretations. The ten-month training course in demography given annually by the Demographic Institute of the University of Indonesia to teachers in other government universities is the outstanding example of an attempt to cope with the problems of limited course offerings within a country and of teaching by untrained instructors.

Another difficulty is that most of the available textbooks are in English or French. Undergraduate population texts have now appeared in Thai and in Korean. One or more texts on important articles have been translated into Korean, Chinese, and perhaps other languages.

A few of the established population centers are carrying out research which is significant both in quality and in quantity. In Thailand the Institute of Population Studies at Chulalongkorn University is completing what may well be the most ambitious single project yet undertaken by population analysts from the region. This is a six-year study of the relationships between demographic, economic and social change in Thailand. It combines cross-sectional and longitudinal data. In Korea the Population and Development Studies Center

at Seoul National University is engaged (in 1974) in an important resurvey of population composition and KAP items in a large town first studied in the initial stages of the national family planning program. In Indonesia the Demographic Institute at the University of Indonesia has well underway a national survey of fertility and mortality in which other government universities are cooperating. These are illustrative of a number of excellent studies which have both academic interest and importance for national development.

Those universities which have demographic research competence can provide an important resource for governments which require particular kinds of population data. There is a danger, of course, that their programs will be wholly determined by government interests or that they will become overloaded by outside demands. For the most part, however, the problem in Asia is a different one in that, with one or two exceptions, governments have not taken any great cognizance of their existence.

As has already been indicated, a few Asian countries have non-university, governmental organizations with sections which undertake some population research. By and large, the work of all these agencies is limited both in quantity and in scope. Understandably, it tends to be "in-house" in nature, involving analyses of program data, as for family planning, or survey data on such topics as employment or migration to the capital city. Population projections are made as the basis for estimating future requirements for schools or school desks or for rice production or for some other regional or national need ten or twenty years hence. Generally, statistical offices limit themselves to the collection, tabulation and publication of population data. They stop short of analyses of the figures they have collected or comparisons of current and earlier data.

It is generally true that research for other than program purposes is not carried out successfully in operating agencies. Day-to-day demands on the organization take precedence. Furthermore, staff are not usually trained

to do research nor interested in doing so. In particular, the number of persons with necessary demographic training is too small in most government units in Asia to permit carrying out population research effectively. Potentially, the principal exceptions to such limitations are the special research organizations such as the Institute of Social and Economic Research in Indonesia or the Bangladesh Institute of Development Studies.

Because of the fundamental need both for good data and for sophisticated analyses of whatever information is available, efforts to develop population research sections within planning boards deserve support. The key problem of lack of manpower can be alleviated by active promotion of population training programs in the country's universities to provide junior and middle-level personnel. Closer cooperation between university population centers and government planners can also conserve scarce manpower resources. By and large, universities by their very nature will be in a more favorable position to carry out significant long-range studies. As yet, most planning units in the region have not made much use of the research centers although some have sought the aid of individuals associated with such centers. And except in one or two instances, advantage has not been taken of the opportunities to contract out projects to those centers which are available.

PRIORITIES FOR POPULATION ASSISTANCE

Table III summarizes some of the factors to be taken into account in determining priorities for population aid, including research and training, in the countries of South and East Asia by developed nations or by their private donor organizations. Included are two kinds of indices. The first involves recognition of a need to control population trends as reflected by the creation of population policies and programs. Does a country have a stated policy to reduce fertility rates or rates of natural increase as an aid to the achievement of development goals? Have family planning programs

been established and perhaps other actions taken intended to implement such policy? How strong are these programs? Second, what is the size of the total population? What is the rate of natural increase? What is the level of living as measured by the per capita gross domestic product of the country? It would be desirable to add to these an index of social conditions, but no satisfactory independent measure exists for which reliable data are available for a range of less developed countries. In these circumstances, figures on life expectancy at birth for both sexes combined are presented in Table III. These reflect in part a nation's health conditions, particularly those which result in higher or lower infant mortality. More broadly, they are an index of living conditions both economic and social.

Column 9 attempts to place each country in the region in one of three categories in terms of the severity of its population condition, the significance of its contribution to regional and world population growth at present rates of natural increase and its recognition of and effort to ameliorate its economic and, to a lesser extent, its social situation. Priorities are assigned with 1 the highest and 3 the lowest. Also involved in this assessment is a judgment of the probability that aid for population activities would now be requested or accepted by individual countries on the basis of bilateral agreements with developed western nations or with their private donor organizations. Such a judgment involves a weighing of economic, social and political conditions within a country as well as of economic and political relationships between countries. Where access is prohibited or restricted by such considerations, as with the People's Republic of China or with Burma, priorities have no meaning in terms of foreign assistance. For the present such countries cannot be given serious consideration as potential recipients of aid, and they are given lowest priority ratings for this reason if for no other.

Based on all the foregoing considerations, the countries of South

TABLE III

Factors in the Assessment of Priorities for Population Aid, South and East Asia

Country	(1) Population policy[a]	(2) Program(s) to implement policy	(3) Strength of family planning program[d]	(4) Total population in millions[f]	(5) Rate of natural increase[f]	(6) Life expectancy[g]	(7) GNP per capita in U.S.$[h]	(8) Accessibility[j]	(9) Priority for aid[k]
Bangladesh	Yes	Yes	3	72	3.0	48	70	H	1
Burma	No	No	-	28	2.3	42	80	L	3
China	Yes[b]	Yes	1	787	1.8	50	160	L	3
India	Yes	Yes	2	575	2.6	41	110	L	2
Indonesia	Yes	Yes	3	127	2.7	48	80	H	1
Khmer Rep.	No	No	-	7	2.9	44	130	L	3
Korea (N)	No	No	-	14	2.8	58	310	L	3
Korea (S)	Yes	Yes	1	32	2.2	62	290	H	1
Laos	Yes	Yes[b]	3	3	2.7	48	120	L	3
Malaysia	Yes	Yes	2[e]	10	2.7	66[e]	400	M	2
Mongolia	No	No	-	1	3.0	58	380[i]	L	3
Nepal	No	Yes[c]	3	11	2.2	41	90	H	2
Pakistan	Yes	Yes	2	66	3.0	54	130	H	1
Philippines	Yes	Yes	3	42	3.4	51	240	H	1
Singapore	Yes	Yes	1	2	1.7	68	1,200	L	3
Sri Lanka	Yes	Yes	2	13	2.2	62	100	M	2
Taiwan(R.O.C.)	Yes	Yes	1	16	2.2	68	430	M	2
Thailand	Yes	Yes	2	40	3.2	56	210	H	1
Vietnam (N)	No[b]	No[b]	-	22	2.1	50	100[i]	L	3
Vietnam (S)	No	No	-	20	2.4	50	210	H	3

(a) Country does or does not have a government policy to reduce fertility rates or rates of natural increase.

(b) Information is believed to be correct, but full details are not readily available.

(c) Limited implementation of a stated general aim to reduce the growth rate.

(continued below)

Table III, footnotes continued

(d) Program strength has been judged subjectively but on the basis of information available on such factors as institutional setting; interest and seriousness of purpose and implementation; quality of administration of program(s); response to programs, continuity, and increase in effort; and apparent effects. Strong programs are rated 1, medium-strong programs are rated 2, relatively weak programs are rated 3, and no program is indicated by a dash.

(e) For West Malaysia only.

(f) Figures are for the most recent available year (1969-1973) as shown in Table 1. All figures are rounded and except for Singapore, Sri Lanka and Taiwan, are believed subject to error.

(g) Life expectancy at birth, both sexes combined; 1960 and after, except India (1951-1960), Khmer Republic (1958-1959) and the Philippines (1946-1949). Sources: Demographic Year Book, 1971 (New York: United Nations, 1972) Table 34, pp. 75[illegible]-759, except that figures for Bangladesh and Pakistan reported as 51.3 before separation, have been estimated for 1972 on the basis of country data.

(h) Gross national product per capita at market prices in 1971 in U.S. dollars as reported in World Bank Atlas (Washington: International Bank for Reconstruction and Development, 1973), p.8, p.14, p.15. Estimated to nearest U.S. $10.

(i) Tentative estimate.

(j) H(igh), M(edium) or L(ow) likelihood that developed nations and private donor agencies in such nations would now receive requests for aid or positive responses to offers of aid for population research and training activities.

(k) Countries are rated with 1 the highest and 3 the lowest priority for aid. Ratings are based on a country's population condition and expected impact on world population growth, on its economic situation, on its population policy and programs and the strength of its family planning activities and on a judgment of its receptivity to assistance from modernized countries.

and East Asia can be grouped into three categories, as follows:

1) High priority for aid in meeting population planning needs (in alphabetical order):

Bangladesh
Indonesia
Korea, South
Pakistan
Philippines
Thailand

2) Medium priority for aid in meeting population planning needs:

India
Malaysia
Nepal
Sri Lanka
Taiwan

3) Low priority for aid in meeting population planning needs; or no present access:

People's Republic of China
Khmer Republic
Korea, North
Laos
Mongolia
Singapore
Vietnam, North and South

Countries in the first group are all growing rapidly. All have moderately large to large total populations so that their potential contributions to regional and world growth are substantial. All except South Korea remain primarily rural self-subsistence agricultural countries. All are characterized by low median family incomes. Each has a policy to reduce rates of natural increase as an aspect of development planning. Each has established a national family planning program in an effort to implement its policy declarations although the strength of these varies considerably. Each is a country where outside aid for population work is presently welcomed.

Some would place India in this highest-priority category. Certainly its enormous size, both in area and population, its quite high rates of natural increase, its rurality and poverty, and its long effort to check fertility levels argue for doing so. It has been placed here in the second

priority group of countries partly because of problems of accessibility and partly because of the seeming intractability of its problems and the very limited accomplishment of its population control measures today. India's overwhelmingly rural people appear to live largely outside the mainstream of effort and interest in limiting family size. In fact, evaluation by states within the country offers a more satisfactory approach and would result in the inclusion of some parts of India in the first-priority category.

By contrast, Singapore has received a low priority in considerable part because of its large acceptor population, clearly committed to small families. These apparently make sense in the context of an urban state, with economically favorable conditions, limiting living space and ready availability of a variety of means to limit births. Economic and demographic successes make it possible now for Singapore to deal with its own conditions and to correct what it may view as population problems without much necessity for outside aid.

The remaining countries in the low-priority group either (1) have not shown any concern with their population trends or (2) have as yet no stated population policies nor programs or (3) are neither seeking nor accepting Western aid. The People's Republic of China obviously falls into the latter category. In addition, however, its apparent success in reducing fertility and its ability to meet its own population problems, as it defines these, suggest that China, like Singapore, receive a low priority for positive reasons. Although circumstances differ in other respects, China may prove an interesting comparison with eighteenth-century France on the matter of reducing vital rates at comparatively early stages of development. Unfortunately, the scattered local figures currently available are not a sound basis for any definitive judgment.

AID FROM ABROAD

What can foreign governments and private agencies do to help whatever countries of Asia want assistance to cope with their population problems?

Generally speaking, the answer is that they can and will take advantage of whatever suitable opportunities exist. Some nations will not accept foreign aid for economic or political reasons or because they do not consider population trends within their boundaries to constitute a problem. Some countries are still at the stage where the most constructive assistance is to provide information and education and perhaps fellowships for academic training. Some countries are seriously concerned with population increase and possibly other population conditions and have policies and programs to try to alter these. In Asia most countries are in the last group and the majority of these have requested outside financial and technical assistance in the development of their own programs. To take advantage of opportunities to provide aid to them is not simply to react positively to such requests. It involves discussion and the presentation of ideas and comparative information. This is often a valuable contribution from outside, which may suggest the "next steps" a country is itself prepared to take.

Furthermore, an assisting agency cannot take advantage of opportunities without a careful assessment of its own goals, which must nevertheless be flexible and subject to frequent review. The intention here is not to undertake an assessment of the programs of the many agencies which have provided aid to Asian nations in the population field. Each one must undertake its own reviews, hopefully in the context of what colleagues are attempting. Rather, the brief comments which follow are simply a summary of what appear to be fundamental institutional needs of these countries in developing their own population competencies.

As in so many other areas of expertise, the basic need is for each concerned country to acquire an adequate supply of trained manpower and of the facilities well-qualified persons will need to exercise their skills. Trained manpower is necessary at every step. It is needed in the process of securing more and better population data. It is needed in the analysis of such data

and in the interpretation of their meaning and significance. It is needed to design and carry out research studies which will be the basis for national planning and for the formulation of programs designed to facilitate population policy goals. More specifically, it is needed to set meaningful goals in national family planning programs, to chart fertility trends in detail and to advise administrators on technical aspects of program implementation. Finally, it is needed to train the staff members who can be expected to work in many demographic or population-related jobs as a realization of their usefulness grows.

Every Asian country which is seriously concerned with its development, however that is defined, requires demographic expertise. There are several kinds of programs and facilities it should have or to which it will need ready access. These can be briefly listed:

1. A master's-level training program at one or more universities. Ideally, such a program would be open to candidates in economics, sociology, statistics, public health and other relevant fields.
2. Research centers at those universities with training programs. Here staff members would carry out studies primarily related to the country or region and graduate students could acquire research training.
3. At the major universities with training programs and research centers a staff of sufficient size so that they can assist other universities and colleges in establishing population courses or in undertaking population research in their own localities, perhaps on a cooperative basis.
4. A course on population, available to all college-level undergraduates. This should treat the demographic situation in relation to the economic and social structures of the country. In addition, sound population materials should be incorporated into social

science units in secondary schools. An informed public is more likely to understand and to support government population programs.

5. A population division within the planning agency or as an independent body responsible to the Cabinet or other high-echelon group. This agency should be concerned with both research and policy formation.

6. An active population commission composed of influential and knowledgeable citizens and government officials and concerned broadly with population issues. It should have a small staff and its operations should involve close liaison with any separate population research and policy organization.

Foreign agencies offering assistance could support the development of facilities and programs such as these in each appropriate country, as indeed many have done with respect to one or another item. Assistance of a technical nature would in many cases be more useful than financial aid alone. It would appear to be of positive value, particularly in the larger countries, to help with the establishment of supporting features such as country population associations, a population journal or one on population and development, or textbooks for demography courses written by native experts. One or more universities with a training program and research center could be aided in establishing an advisory service to other schools which want to develop a single population course or a small program or to begin demographic research locally, possibly in cooperation with a major university. A university or the Ministry of Education or some other appropriate agency could be assisted in developing a population information bulletin or in writing up research findings for country magazines, newspapers, or radio programs.

Support for the establishment of university population programs is of major importance for a number of reasons. One, already mentioned, is to promote an awareness, and hopefully an understanding, of the country's

population problems among its college graduates, who will assume positions of leadership nationally or in their own communities. Another reason is to make it possible to analyze in the context of a particular country the important population questions about so many of which there is still a notable ignorance. A master's training program is an excellent device for screening the caliber of students and reducing the likelihood of failure in advanced university training programs abroad. The latter are costly to duplicate and in most countries the number of persons who will be required with training to the doctoral level in demography will be too few to justify expenditures for such programs at home. Indeed, in most Asian countries doctoral programs are rare or non-existent.

Assistance from abroad can be used most effectively in the development of a total, integrated set of programs and facilities. These are not merely ends in themselves but also the infrastructure to provide the training, research and service necessary for an effective policy and program planned to meet a variety of population conditions. It is particularly important to do whatever is possible to facilitate the interchange of both ideas and product among the separate units within the structure. This implies the use of research centers to study questions which will have significant implications for policy making and similarly, the use of research findings in the design of policies and the formulation of programs. It means the employment of graduates of training programs by universities and government offices. It suggests the creation of a citizenry which has a flow of information on many population topics presented to it. It supports the idea of seminars, conferences and associations where those involved in population matters can come into direct contact. It promotes a climate of understanding and a prominence for population questions in which it is more difficult to maintain the attitude that population problems will solve themselves.

Throughout, the intimate but inadequately explored relationships between population and development require primary emphasis. The critical

examination of national development goals and of the probability that they will be reached with the programs being employed involves treading on delicate ground. Nevertheless, the general acceptance of some kind of development aims, and the close relationship of population with development, may make the services of a highly trained and sensitive population expert welcome. If no local person with such competence is available, the technical services of such a visitor may be acceptable. He might be a resident advisor or a person selected for a special assignment from the regular staff of an assisting agency or someone on special detail.

The need to consider population in drafting policies and programs for the social, as well as for the economic, aspects of development demands specific recognition. Such fundamental development considerations as employment, social stratification, and land reform are intimately related to population size, growth rates and distribution. Similarly, the demand for education or public health services depends, among other things, on the number of persons in different age groups and types of residence areas. The process of development, in a word, is a process of social change. Separation of its economic, social, political, and economic interrelations is arbitrary and, overall, detrimental to the establishment and the achievement of broad human welfare goals.

Until now, plan organizations have been primarily the preserve of economists and professional planners. This compartmentalization has resulted in a focus on such factors as production and income. Although these are important plan elements, they cannot be equated with broader definitions of development. All possible opportunities to expand the scope of planning boards to include economic, social and demographic considerations should therefore be taken up. In a number of countries a necessary first step may be to provide training and interim technical assistance in demography for government agencies responsible for social development objectives. After that, some kind of regular liaison can be supported to make it possible to view the causes and consequences

of alternative population changes on areas of mutual interest for economic and social planning such as underemployment. The final stage would be a shift from liaison mechanisms to merger within one organization so that population factors in planning, like other relevant variables, are always reviewed.

A clear majority of Asian countries now accept the need to slacken population growth rates. Many of these nations are coming to see that family planning, valuable as it is as a health and welfare service, cannot be relied on without supporting measures to bring about the low rates of increase posited in national plans. What foreign assistance agencies can do now is to help these countries to increase their level of knowledge and sophistication so that they can explore in much more detail and with greater certainty the effects of population factors on their present and future. They will then perhaps be closer to an answer to the difficult question, "Are economic and social development likely to be achieved in the absence of population planning and implementation?" If the answer is negative, they should know this soon.

SUMMARY OF NEEDS AND OPPORTUNITIES FOR AID

Within the context of institutional development, the principal population needs of the countries in Asia and the recommendations for action to meet these needs can now be summarized. These needs are ones identified by the author and may or may not reflect the perceptions of individual countries within the region. Furthermore, as the discussion so far and the specific country reports to follow hopefully indicate, the degree to which these needs are already being met varies from area to area. Recommendations for assistance by foreign donor organizations will necessarily be modified by the particular set of circumstances which characterize a specific country.

The major perceived needs are these:

1) A substantial increase in manpower at various levels of demographic expertise so that each country will have an adequate

supply of well-qualified persons to fill both expert and middle-level and junior positions in government agencies, in colleges and universities and in the private sector.

2) The development of local training programs to provide the manpower needed for at least the middle-level and junior positions.

3) The improvement of vital statistics and other population data which are basic to meaningful planning and policymaking.

4) The development and strengthening of population research facilities to provide improved knowledge of demographic conditions which influence development.

5) Strengthening the relationships between research staffs and analysts, particularly those in university population centers, and government agencies concerned with development planning, in order to increase the use of research results in plans and their implementation.

Foreign donor agencies can aid in meeting at least the first four of these needs in appropriate situations and depending on the aims and constraints of their own policies. Assistance is needed for:

1) Manpower development through both local and foreign fellowships to expand the number of demographers and particularly of other social scientists and statisticians with the varying degrees of demographic competence needed in diverse agencies and under a variety of titles.

2) The development and support of local training and research programs and centers, particularly in connection with universities but also within appropriate government ministries or departments.

3) The development of population units in national and regional planning organizations and in other agencies involved in social development planning and programs.

4) The encouragement and support of research on population-

related subjects by qualified individual applicants, particularly where such research makes a contribution to national development.

5) The improvement of the basic population data which are essential for research and for efficient planning.

Donor assistance in support of these activities can take a variety of forms ranging from the provision of information, for example on programs elsewhere, to substantial direct funding, and may include foreign and local training fellowships, staff positions, research and training facilities, research project support, both financial and technical, long-term and short-term visits from experts serving as consultants or advisors, and special projects such as population education and population information services designed to promote the public understanding needed to implement specific plans.

BLANK PAGE

Chapter 5

REPORT ON INSTITUTIONAL DEVELOPMENT IN DEMOGRAPHY AND RELATED SOCIAL SCIENCES LATIN AMERICA

I. Summary and Recommendations

Latin America's record demographic growth rate in recent decades has resulted in a true population explosion at the universities, where enrollments are growing 11 percent annually. This pressure has not only changed traditional models of higher education, but brought a new diversity into academia. New graduate programs have been introduced but only a few in DARSS, and the region is far from having a self-sustaining capacity to produce top quality social scientists and technicians.

In terms of enrollments, the social sciences now lead with more than a quarter of a million students from varying backgrounds, studying for new careers and professional specialities. This rapid growth has made the task of developing the social sciences difficult in that a great deal of effort has had to go into curriculum development, teaching, and administration rather than research and theoretical writing. In addition, the vulnerability of the social sciences to political upheavals have weakened them. Population studies especially are exposed to political events and pressures thereby making the institutional development of demography and related social science programs (DARSS) a difficult undertaking in the large public universities. The recent efforts to develop DARSS programs have taken place largely in small private universities or in specialized research centers. Most serious new graduate studies in the social sciences have been related to major social problems of the region, and this is a major justification for concern with population.

In Latin America, the demographic variable has been neglected in development planning. Recently, however, two large countries, Colombia and Mexico, have adopted population policies designed to lower their growth rates. Universities throughout Latin America are beginning to become aware of the need to study the implications for development of population growth and its structure and distribution.

The challenge to international donor agencies is to encourage and assist the development of strong university-based programs in population studies and to increase the number of high caliber demographers and social scientists interested in population problems. Increasing demand for these experts is in evidence in many of the countries of the region. The participation of demographic experts in government planning commissions would greatly aid the policy process. Experts are needed to produce research findings and to synthesize and interpret them so they can be used as bases for policy formulation.

Often, in Latin America, demography is equated with birth control, and intellectuals and students may view university programs in population with suspicion. When externally funded, and narrowly conceived, these efforts are seen as attempts to change the fertility norms of the society and therefore, are opposed. In their institution building efforts, international donor agencies must recognize that in those Latin American countries which are ready for graduate or professional DARSS programs, that the development or expansion of such programs should be carried out with the utmost concern for local priorities and the social and political environment in which the programs are to be located.

During the last decade or so, the Population Council and the Ford Foundation have been able to identify high caliber scholars in national institutions and support them at crucial moments in their demographic research interests. The record of institutional development, however, has been uneven, indicating that much remains to be done and underscoring the difficulties inherent in the task. Thus, from a review of the Council's efforts, from visits to many Latin American institutions, and from conversations with scholars and students, the following emerges as the main recommendations of this regional report:

1. Institutional development in DARSS in Latin America must be a response to local initiative and must have grass roots' support and wise leadership

within the university community to be successful.

2. Institutional development efforts must avoid overemphasis and "favoritism" of demographic studies within the social science spectrum thus preventing rivalry, antagonism and downright opposition from faculty and students.

3. International donor agencies should recognize that demography is a social science "sub-field" that belongs and is most secure within well established economics or sociology programs.

4. Institutional development must be viewed as a maturation process in which the grantee is encouraged and assisted to try out and to work out the arrangements that best fit local needs and constraints.

5. Institutional development efforts in DARSS should strive to reinforce established programs and expand them toward DARSS activities, rather than create exclusive projects of demographic training and research.

6. Institutional development efforts should permit staff travel and faculty exchange as well as financial support for local programs. This implies a commitment on the part of the donor agency to help identify talent and expertise wherever this may be available and administrative flexibility in working out transfers or staff arrangements.

7. "Good-risk" investment in moderate sized, high quality, often private institutions must be counterbalanced with less-safe investment in some of the large public universities of the region when opportunities arise, at least on an experimental basis.

8. In smaller nations a centralized strategy to develop a single but strong institution should be preferred, while in larger countries a decentralized effort involving more than one institution can stimulate different orientations and a healthy competition.

9. Over the next ten years, at least two countries should be encouraged

and assisted in developing doctoral programs in demography: Mexico and Brazil.

10. High priority should be given to the development of DARSS master's level (or professional programs in Brazil, Colombia, Peru and Mexico, while such programs at a lower priority should also be contemplated in Chile, Costa Rica, and Venezuela.

11. Flexibility should be maintained to permit institution building at regional training, research and policy centers such as the Economic Commission for Latin America (ECLA) and the Regional Population Center (Bogota) which offer non-degree training and technical guidance and serve an important function in assisting middle and higher level personnel of governmental planning agencies as well as selected members of academia.

II. Demographic Overview

With just over 300 million inhabitants in 1973, Latin America is among the least populated of the world's major regions, however, its rate of population growth, 2.8 percent per year - a doubling of the population every 25 years - is a world record. A third of the Latin American population lives in Brazil, the largest country in Latin America, another third in the next three largest countries (Mexico, Argentina and Colombia), and a sixth in four countries with from 9-15 million each. The rest live in 19 other nations plus a few island territories some containing less than a million inhabitants each (Table 1*).

Following World War II, Latin America was able to make enormous gains in reducing mortality, but fertility - with a few exceptions mostly in the southern tip - has remained at persistently high levels in many of the larger nations, accounting for the rapid growth of the region (Table 2). There are remarkably

---

* All tables are included in Appendix A.

homogeneous areas with regard to fertility: the southern tip of South America has relatively low fertility with crude birth rates below 30; Central and Tropical South America have birth rates over 40 (the corresponding gross reproduction rate is between 2.7 and 3.2, representing a completed family size of 5.5 to 6.6 children, Table 3). In several Caribbean island countries fertility appears to be declining.

Among the large countries with sustained high fertility are Colombia, Mexico, Peru, and Venezuela. In the past 50 years or so some of these countries have tripled their population, and their growth rate, now above 3 percent per year, will result in a doubling of their present population before this century is over (Tables 1 and 4). Among the explanations for this rapid growth are the extended family structure, coupled with deeply rooted traditional values and a strong Catholic hegemony which, even in the face of social change and modernization, have contributed to the preservation of high fertility norms.

Pre-independence Latin America was ruled by Spain and Portugal which believed that to colonize was to populate. Today colonization has taken a new meaning, but the end remains the same. In many countries governments believe that the solution to population pressures is the opening of uninhabited areas to cultivation and settlement. Thus, the population problem of Latin America is not perceived as deriving from particularly large populations but from populations that are poorly distributed. Nor is growth as such recognized as a barrier to economic development. Brazil has recently announced her intention to become a world power. However, with the world's fifth largest land area and huge mineral and agricultural resources, it lacks one additional asset: enough people. The argument often runs that it is not essential to have a large population to be a world power but that in point of fact all world powers have large populations. Thus Brazil's goal is to reach 200 million people by the 1990s, or twice its

present size. Mexico, on the other hand, until recently had held that its high growth rate was a contributing factor to its rapid development during the past decade. But the government has reversed that position calling for an effort to lower demographic growth as well as redistribute its population.

Unlike the English-speaking Caribbean nations, the Latin American Spanish-speaking countries have been notably timid with regard to adopting population policies to curb growth rates. The exceptions have been the Dominican Republic (1968), Colombia (1970), and Mexico (1974). On the other hand, public support of family planning programs has been widespread (Table 5). The change in Mexico's position will undoubtedly have an impact in Latin America, and it is likely that some of the high growth countries of Central and Tropical South America may follow suit. In fact Venezuela seems to be leaning in that direction.

For Latin American government planners, urbanization has been a more immediate problem in its population implications, overshadowing both growth rates and fertility. Today approximately half of the region's inhabitants live in towns and cities and three out of five will be urban dwellers within a decade (Table 6). The rate of growth of urban areas is estimated at over 4 percent for the region as a whole. Urban growth poses strains on national budgets often unable to cope with ever increasing financial demands for housing, education, urban services and jobs. Another by-product of urbanization has been the mushrooming of squatter settlements and slums around all major Latin American cities. Additionally, a young population with its potential for reproduction and its lack of preparation for gainful employment are severe barriers to economic development. In most Central American countries a full half of the adults are illiterate and many of those now under 15 years of age will enter adulthood without adequate education (Table 7).

Latin America's population problem has many facets and the importance

of its less tangible manifestations such as high growth rates is slowly being recognized. Rapid urban growth, unemployment, education and nutrition have, with their natural saliency, still obscure the more fundamental issues of growth and its momentum.

III. The Universities

While Latin America's population grows at almost 3 percent per year, its institutions of higher education are experiencing a much greater population explosion with a current growth rate of 11 percent annually (Table 8). This rate has doubled in just over a decade, and projections indicate continuing high growth till the end of the century. In 1955 there were two university students per 1000 inhabitants; ten years later the figure had doubled, and by 1975 it will have doubled again. The present United States level of 35 students per 1000 inhabitants enrolled in universities is projected for Latin America in the year 2000.[1] Universities from Mexico to Argentina are trying to cope with the increasing demand for admission but not always succeeding in accommodating ever larger cohorts of students, nor producing well-trained cadres of professors and researchers.

The need for university education is deeply felt among Latin American youth whose expectations have been raised by a public system of secondary education which grew from a total enrollment of somewhat less than 4,000,000 in 1960 to almost 10,000,000 by the end of the decade. The private schools have also grown but not as rapidly, possibly due to economic constraints and a concern for quality rather than quantity. At both secondary and university levels, private, especially Catholic, schools have established a tradition of excellence and elitism. Public education, on the other hand, has responded more readily to demographic, social and political pressures which have lead to an increasing democratization of university education. As Ocampo Londoño states: "In a good number of countries

there is a tendency to open the university to the greatest number of students possible and to abolish all obstacles, especially entrance examinations."[2] Both the increase in enrollments and the entrance to the university of students from a wider variety of backgrounds is having a profound effect on the university system. A similar educational structure, stemming from a common cultural heritage and widely held models of higher education, is becoming increasingly differentiated. Change and diversity are the characteristics that prevail today. In the sixteenth, seventeenth and eighteenth centuries the universities of the then Spanish colonies concentrated on "the training of members of the liberal professions, namely, theology, law, medicine and the arts."[3] In the twentieth century, especially in the last two decades, the orientation of the Latin American university has shifted considerably with a greater emphasis on scientific and technological fields. In addition several important universities and many new schools and faculties within universities have been added recently.[4] With increasing diversification in the subjects available for study, there has been a tendency to modify or change the widely used continental European model of higher education, which viewed university studies as essentially professional, and secondary education as providing the general educational basis.[5] Recently, an increasing number of institutions are adopting a credit system and offering separate undergraduate and graduate degrees or variations therefrom, permitting a greater flexibility in the design of new programs. The result has been a new emphasis on graduate specializations and the introduction of new fields and careers.

While today's reform concentrates on instructional programs, structural reforms have been shaking the Latin American university systems for most of this century. The origins of the reform movement date specifically from 1918, the year of the Reform of Córdoba which resulted in four major changes or demands: 1) university autonomy, a kind of extraterritorial privilege and absolute freedom

for its direction, as well as for the participation of students in political movements; 2) voluntary class attendance to enable those who work to study; 3) the right of the students to veto professors who had obtained positions through family, economic or political influence; later this was generalized to include those who did not teach well or whom the students did not like for one reason or another, or who had conflicting ideas; 4) the right to participate in university government, or so called "co-government." This platform of the Argentinian student reform movement became the goal of student movements everywhere in Latin America. The outcome has been a larger participation of students in university decision-making, politicization of the university and power struggles which sometimes have paralysed the university. Today, Ocampo Londoño states, "The majority of university laws, whether through conviction or through fear, provide a place for the student body, with more or less power."[6]

The demand for part-time study and the lack of a truly academic tradition in Latin America have resulted in the institutionalization of the part-time professor. Many systems are trying to correct this by providing adequate salaries and benefits and by increasing the career possibilities within the university. More recently the creation of research centers and institutes in many faculties has opened new activity areas that enhance university career opportunities. Traditionally, research in Latin American universities has been of limited scope or non-existent. There is a conflict between the time needed for research activity on the one hand and increasingly large teaching loads on the other; the result is usually detrimental to the former. Research, in view of the insecure academic environment and the nonrecognition it sometimes receives, often takes place in private or semi-autonomous institutes offering a more solid economic platform and a less politicized situation overall.

Today's Latin American university system finds itself in a crucial

period characterized by rapid change and a pressure for program and career-opportunity expansion, a task compounded by the need to accommodate ever larger numbers of applicants. In sum, the Latin American university - if generalizations are possible - has several important characteristics:

1) It tends to be professionally oriented, the student concentrating from four to six years of university study on a single subject matter -- economics, law, sociology, medicine, etc.
2) Graduate education is still rare and poorly developed, especially in the social sciences.
3) Faculties are largely staffed by professors whose principal jobs are often outside the university. In all but the medical schools, scholarship, research, and publication activities are rudimentary.
4) Enrollments tend to be open, many students are part-time, and dropout rates are high.
5) Facilities such as libraries and computers are poor. Students are unaccustomed to using either.
6) The university community tends to be highly politicized. Students wield considerable decision-making power, and leaders tend to be leftist and often anti-American. Top administrative positions are elective and usually short-lived.
7) The major universities depend almost entirely upon government subsidies for their existence. Faculty salaries and expenditures per student are low, and demand for building expansion is always high, placing enormous strains on university budgets.

IV. The Social Sciences

More than a quarter of a million students, the largest number in any of

the major fields of study, were enrolled in social science programs in Latin American universities in 1970. Within a decade the social sciences displaced medicine as the most popular field of study; with the latter now occupying third place, and engineering second (Table 8). This phenomenal increase in student interest in the social sciences has resulted in an extremely rapid expansion leaving little time for the adequate development of theoretical foundations and models that would serve to study the main problems of the region. The Latin American Council for the Social Sciences (CLACSO) identifies the following main problem areas affecting these disciplines: the relative isolation of social scientists both nationally and regionally; a dependency on the United States and other non-regional sources for funds and theoretical orientation; vulnerability to political and economic events; and, the need for a greater response to the social problems affecting the continent.[7]

In Latin America the social sciences evolved about two decades ago from the ambitious goal of providing essential analyses for the formulation of development policy. The present situation shows contradictions, military governments in countries such as Brazil, Chile, Argentina, and Peru that view radical and non-conforming social scientists with increasing suspicion and question their ability to contribute solutions to the existing problems, and the increased technification of government that these regimes favor. In Brazil, leftist leaning social scientists were "forcibly retired"; more recently the Chilean military declared sociology a subversive activity, and during the events of September 1973, sociology and other books were burned publicly. Ideological confrontations are particularly strong in the university and between the government sponsored research institutes. As Luders comments:

> A very important aspect in the evolution of Latin American social sciences is that research institutes tend to be sharply divided on the basis of methodological and ideological differences --

> the clearest line being drawn between those institutes which are Marxist and those which are not. Moreover, competition between institutes (ideologies) explains, at least in part, the relatively rapid development of these sciences in Latin America.[9]

Ideological positions determine not only the orientation of many research projects but their methodology as well. The issue is ever present, and it is undoubtedly a sensitive and difficult one to resolve. On the other hand, in subjects such as population research, ideological implications cannot be avoided. These implications render the social scientist vulnerable and insecure in the face of political confrontations.

This vulnerability of the social sciences to political circumstances severely handicaps research, the objectivity of both research and teaching, and in fact, hinders scholarly production in Latin America. The social scientist must appear "relevant" or "applied" or "ideologically on the right track," respond to government demands for unbiased analyses as well as to confrontations from strongly leftist students. How does he do it? It is an enormously complex challenge, but a necessary one, in order to resolve the problems of the future direction and status of the social sciences as well as the Latin American university itself.

Among the social sciences, economics is the strongest in most Latin American countries. Both research production and training in economics have been impressive. In some countries, Chile, for example, there is an ambiguity as to whether a particular social science offers a "professional" or a "scientific" career. Chilean law, for example, designates the field of economics as: "commercial engineering" within which economics and administration are the two main sub-fields. Thus economics is clearly a "profession" while sociology, political science or anthropology fit better into the category of "sciences." The main difference between the science of sociology and that of astronomy, for

example, is the politically "neutral" character of the latter. Yet sociology stands out in Latin America because of the amount and quality of its research production. Luders notes:

> As in economics, most of the work in sociology has been related in general to the social aspects of economic development, including the study of the industrialization process. Relatively little work has been done either in social psychology, history or political sciences.[10]

The 1970s will be crucial to the status and development of social sciences in Latin America. As development processes in this region are better understood and the differences from the European or other relevant experiences established, new theories and models will emerge. The need to sort out the many factors affecting development is paramount among the social scientists of these countries. Their study must be encouraged and assisted and the place of demographic factors understood, despite the political atmosphere that impedes or slows down the intellectual process.

External Funding in the Social Sciences

In the face of such complex problems, external funding agencies have had only modest success in their attempts to build stronger academic institutions in Latin America. The Ford and Rockefeller Foundations have invested heavily in an effort to improve social science research productivity and teaching quality in Latin America. FLACSO, the Latin American Faculty of Social Sciences in Santiago, Chile, with Ford Foundation and UNESCO aid, has been a major contributor to the training of social scientists for the entire region. Other Ford Foundation projects in the social sciences are at El Colegio de Mexico and the Catholic Universities of Chile and Peru, the Institute of Peruvian Studies in Lima, and the Brazilian Center for Analysis and Planning. This reflects a clear trend toward investment in private, often elitist, institutions where it is not only

easier but safer to promote institutional development.

Despite the fact that $14,250,000 was invested by the Ford Foundation in Latin America in 1972, a great part of which was allocated to social science or related education projects, Ford has been unable to develop major new social science activities at major public institutions such as San Marcos of Peru, the National University in Colombia, the University of Chile, the University of Buenos Aires, the National University of Mexico, or the Central University of Venezuela. Provincial universities, on the other hand, while less volatile politically, are normally so poor in quality or in resources that they rarely qualify for assistance. There are, however, several other types of institutions where modest successes have been scored:

1) Private universities. They are smaller, less politicized, less anti-American, and have stronger and stabler administrations. El Colegio de Mexico and Los Andes in Bogota, plus the Catholic institutions in Peru, Chile, Brazil, and Venezuela have received Ford Foundation and Population Council assistance. El Colegio de Mexico is considered a success.
2) Private research and training institutes. CEBRAP in Brazil, Di Tela in Argentina, Regional Population Center (CCRP) in Colombia. These are considered much easier to work with, academically elite, but somewhat out of the political mainstream.
3) Quasi-governmental institutions. CENDES in Venezuela, the Brazilian Institute of Municipal Administrations, FEDESAROLLO in Colombia, and others.
4) International agencies. CELADE, ILPES, etc.
5) Professional groupings. ECIEL (economics), FLACSO (social sciences), PISPAL (population policy) carry out research and short term training

programs, often with international support.

V. Development Policy and Population Study

Traditionally, governments in Latin America have paid little attention to demographic factors in development planning. In the 1970s there is evidence of a new attitude and concern about the influence of population on economic development, and vice versa. Rapid population growth resulting in increased proportions of people in the younger age groups, urban expansion and unemployment are, among others, recognized as obstacles to development by governments that formerly took a pro-natalist position. Policy shifts, notably those of Colombia, and recently Mexico, indicate a new attitude and concern. This emerging concern on the part of governments is also reflected in the universities which have opened their doors to the study of the population question. National, state and city agencies in many countries of the region are presently seeking demographers for positions but are often unable to fill them. Research centers have been launched with the specific objective of studying demographic implications and their influence on development.

An increasing demand for demographic expertise is not to be mistaken for substantial changes in national positions on the population question. An overwhelming majority of the countries of Latin America abstain from public policy pronouncements on population. What is important is that these countries are studying the problem and seeking answers that might lead to a formalized policy position. National demographic expertise for evaluation and analysis of population factors is low level or non-existent - although there are notable exceptions - and increasingly, governments or local agencies turn toward the university in search of talent. For the past ten years or so CELADE, the Latin American Demographic Center in Santiago, has contributed to filling this need by training

specialists in the techniques of demographic analysis. Today, institutions of higher learning are in various degrees beginning to respond to the need to train demographic experts.

In Latin America, population research has tended to precede demographic training and the former has often been located in non-university settings. In Colombia, for example, ASCOFAME and more recently the Regional Population Center have carried out a great deal of research activity and publishing in population and related topics but have not been directly involved in the training of demographers. In other countries specialized institutes, foundations or international research centers have been the locale of in-house demographic research activity but generally have not made attempts to link with existing university structures. CELADE is an exception here, but not very successful in its university affiliation.

The question also remains as to the influence that research activity has had on government planning and public policy. Many of the conclusions or major research results from population studies remain unutilized at higher policy making levels often due to lack of sophisticated analysis and proper interpretive filters in advisory councils and national planning commissions. At higher advisory and decision-making levels there is a need for high caliber social scientists who can synthesize as well as utilize the products of demographic research in policy formulation.

Population policy, especially when it emerges as a statement to reduce fertility, runs contrary to the position of a large segment of national intellectual and political elites many of whom believe that rapid population growth is an essential condition for economic development. This belief is deeply rooted and can be traced to the early days of the colonial expansion that sought to populate a large empty continent, to dominate indigenous populations, and to

control vast natural resources. As populations grew so did economic activity, fostering a nationalist spirit. This led to the development of an independent system of Latin American nations linked by an Ibero-Catholic tradition but separated in the pursuit of their own destiny. An essentially agricultural value system, a semi-feudal societal structure, and a military ideology, all of which equated numbers with power, plus the extended family norm reinforced by a pro-natalist religious ethic, and lastly, a so-called "machismo" attitude, are some of the reasons for the persistence and strength of the populationist position so often encountered in the continent. This is reinforced by the myth of a vast continent with unlimited space and natural (mineral) wealth which is unexplored and unexploited. A political leader of one of the smaller Latin American countries illustrates the point:

> With our great territorial size we do not have the problem of overpopulation, instead we must expand our population so as to be able to exploit the wealth of our nation. Our vast territory can house ten million people by the year 2000 (more than three times as many people as the country now has). We must have a constant population growth to avoid stagnation and the possibility of a country of old people (half the population is presently below 15). We must expand our population to carry out the social and economic plans of the future.

The wealth of many nations is perceived to be in the hands of multi-national corporations' and United States' interests. Nationalistic feelings view these interests with increased hostility and suspicion. In several countries the result has been outright nationalization of oil, copper and other extracting or manufacturing enterprises. This has increased the tensions between the colossus of the North and its Southern neighbors. In the very recent past, Latin America has experienced a substantial increase in authoritarian military governments leaving only Mexico, Colombia and Venezuela, among the larger countries, to uphold the democratic tradition. Latin America has, in several instances, sacrificed freedom of choice for stability and a renewed promise of "planned" economic

development. What role demographic factors will play in the plans of military governments is still very much an open question. In Argentina, General Peron called for an increase in population growth rates. Brazil would like to double its population before the century's end. Thus, for the moment, there are two types of policies and models: the Mexican and the Brazilian cases best illustrate them.

VI. Institutional Development in DARSS

A. Rationale for Action

Little doubt exists that there is an increasing demand for population specialists at various academic and government levels in Latin America. The question that is subject to debate is whether we need to create formal demographic specialties in Latin American universities rather than recruit professionals from related disciplines and "specialize" them in demography by means of ad hoc intensive courses. Similarly, there could be an argument for investing "x" dollars in fellowships for advanced training of nationals at foreign population centers of worldwide renown rather than investing the same amount on high risk training programs at local institutions. While these two are not mutually exclusive and both are needed in Latin America, these issues are essential starting points for discussing and putting forth a rationale for institutional development.

Formalized VS Ad Hoc Approaches

Latin American universities, as is stated elsewhere, are evolving, following a variety of models that make generalizations difficult. Furthermore, many universities are now trying to cope with the often conflicting pressures for reform and change that come from within and from outside. Where institutional development in DARSS is concerned we use the word "specialty" in a flexible way. Many universities offer only professional degrees (i.e., after five years of

study), others offer a posgrado (usually one year of graduate studies but awarding only a diploma of specialization rather than a formal degree), and lastly, the undergraduate-graduate model with a master's degree awarded after two years of specialization. The latter is becoming increasingly the model followed by universities reforming their traditional systems. Universities in several countries are in the process of initiating graduate studies. In general, these programs are seen as essential to solving the more pressing and vital problems of the region and as an alternative to the traditional professions.

Demography in Latin America is increasingly in the second, third, and in some cases fourth stage of development. That is, the first stage, in which talent was drawn from neighboring or related disciplines, has been occurring for some years; the momentum thus generated is leading inexorably, through successive stages, to the establishment of demography as a recognized professional social science specialty within economics or sociology in Latin American universities. The uniqueness of the pattern exists because research emerges out of personal interest by professionals from a number of disciplines such as medicine, architecture, economics, sociology and others, which gives the initial push. Later, this is followed by a demand for personnel trained in demography, thus creating the basis for the eventual formation of university programs. The following stages illustrate the process:

1) Initiation - isolated research, from a variety of disciplines and perspectives, concentrates on population related topics.
2) Exchange - results are publicly discussed, short-term courses in demography and conferences on population and development (including numerous topics such as health, urbanization, etc.) take place, information on the subject is exchanged.
3) Institutionalization - population research is integrated into

existing research centers or new ones are created for this purpose; demands for trained experts increase.

4) Consolidation - demographers (some trained abroad) are employed by universities and population specialties within degree programs are started; training and research are consolidated and demography becomes an established academic field within economics or sociology - and occassionally independently.

These four stages of institutional development are helpful in evaluating the status of demography and related social sciences in Latin America today. Alternatively, these four stages can be used to trace longitudinally the development of the discipline, although that is not our primary concern here.

To stimulate and attract members from other disciplines to demography is, when weighed against training of demographers in graduate or professional specialties, a task that might be justified or beneficial in only some countries and in others applicable to only the provincial areas. This type of training is usually accomplished by specialized courses of the type which the Latin American Demographic Center (CELADE) has for several years been organizing and financing in several countries. Many institutions continue to be interested in this ad hoc approach as a means of gaining first hand experience in population studies and perhaps as a preliminary step to the formalization of more ambitious plans. Such is the case of the Federal University of Pernambuco in Recife, Brazil, and the University of Zulia in Maracaibo, Venezuela, and the Autonomous University of Santo Domingo in the Dominican Republic, among others. Therefore, rather than seeing one approach as an alternative to another, both can be considered as different positions along a continuum rather than in competition with each other. International donor agencies must recognize that there is room for both short term and permanent training activity and also that in some countries the one has

already been done and the other is now needed. To illustrate, countries such as Mexico or Brazil are increasingly ready for DARSS graduate specialities in demography (and indeed such programs already exist in these two countries) and others such as Guatemala, Paraguay or Colombia are not yet at that point.

Fellowships in Demography

A fellowship program for study and research abroad could be viewed as an alternative to institutional development. A foreign fellowship program is in fact a cornerstone of institution building efforts and should be considered an essential component of international efforts in the development of population studies. The question is not whether it should be done. But who should do it among international donor agencies. From the viewpoint of the recipient, two considerations are important: destination and duration. In the particular case of DARSS in Latin America, the destination of recipients of fellowships in demography has been the United States or Europe. (The Population Council and Ford Foundation are, among others, important sources of funds). The duration of these fellowships varies but generally speaking the doctoral student will be supported for the time necessary to complete his or her degree.

The holder of a doctorate anticipates a high position upon returning but often his expectations are not met, least of all within the academic world. In some countries, such persons might also be overqualified for the available government positions, thus the international organization becomes the most likely source of employment. These assignments usually lead to the removal of trained talent from the country of origin, and often from the discipline.

While international fellowship programs are a necessary step in the development of a trained cadre of demographers, much of this effort can be lost if the international donor community is not responsive to the strengthening of

academic programs in the field of population. Regional or national fellowships are needed but seldom have been available, an exception is the Population Council support for fellowships to study population and social science in the two-year Masters program in Peru. In Brazil, the Ford Foundation has concentrated its resources on fellowships for graduate study abroad. If the Population Council or other donor agencies aid in the development of university programs, Ford might then move to fund national fellows studying at Brazilian universities or bring other Latin Americans here to study. Interestingly, while Ford is a leading source of fellowship and research support for DARSS in Brazil, it does not contribute to or aid institutional development. The Population Council and other agencies are expected to handle these efforts.

It must be concluded that a fellowship program is essential to create the basis for institutional development but that it is not an alternative to institutional development: it is its logical counterpart. What is needed today in Latin America are programs of high excellence in both DARSS training and research that present fellowship applicants for international study with Latin American alternatives.

Location of Institutions

The view presented here sees institutional development as the last in a series of often unrelated steps in the evolution and maturing of DARSS within a particular academic setting. The parameters defining this academic setting are intimately related with development indicators especially as they reflect the maturity of educational programs in a particular country. Short-term courses, fellowships, research and other activities are viewed as separate but necessary events forming part of a wider framework of activities among which institutional development represents the final objective. There is an important reason for this:

institutional development is different from research, from short-term courses, from study fellowships, in that it is the one element of permanency in the series.

Thus far, much of the emphasis has been on an academic setting for DARSS institutional development, but what about other locations? Other possibilities do exist and fall into three categories: 1) government agencies; 2) semi-autonomous government associated institutions; 3) fully autonomous institutes. The first case would include census or statistical offices which are found in nearly all countries with varying degrees of research capability and activity but seldom include a permanent training program. In Brazil and Peru, for example, Fundacao IBGE (the Brazilian census bureau) and OTEMO (the Technical Office of Manpower Studies in the Peruvian Ministry of Labor) have ambitious research programs but offer no formal training.

The second type of institution, best represented by the Center of Population and Development Studies (CEPD) in Peru, seldom goes beyond a specialized training course. CEPD was established by the Peruvian government in 1964 to study population matters and advise the government on population policy. A year later CEPD organized a seminar on population and development. In 1968 it briefly entered the family planning field but withdrew as the military government restricted its role to activities in research, information and education. As for population policy, the contribution to date has been minimal.

Lastly, largely autonomous institutions such as ASCOFAME or the Regional Center (CCRP) in Colombia, CEBRAP in Brazil, or international centers such as CELADE in Chile and Costa Rica are establishing a tradition of high quality research in DARSS. But except for CELADE, these have not provided an equally important training component in DARSS, although both ASCOFAME and CCRP have trained in medical demography and family planning; beginning in 1975, CCRP will train for

program research and evaluation. In short, the university and selected regional organizations represent the best locations for degree programs in demography and related social sciences if these are to be of high quality, permanent, and relevant to the social and political environment.

VI. Institutional Development in DARSS
B. The Population Council Record

The development of professional manpower in demography and related social science in Latin America has been aided immensely by the Population Council's overall investment in population research, training and fellowships in the region. The Council has been able to identify top high caliber scholars at national institutions and support their efforts at crucial moments. Increasingly, these professionals are playing important roles in top level national advisory councils, universities, research centers and international organizations. Yet the record is also uneven, revealing areas where more can and should be done.

In Latin America, Colombia stands out as one of the prime targets of Population Council investment in institutional development. Programs have been funded at the University of Los Andes, at ASCOFAME, School of Public Health, and at the Regional Center. Thus, a longitudinal analysis of the Council's investment in Latin America would reveal a concentration of research and institutional development activities in Colombia, with its efforts more widely dispersed elsewhere. Colombia is the only country in Latin America where the Population Council maintains an office with limited regional responsibilities.

The Population Council's Colombian experience serves as an excellent case history to illustrate the promises, frustrations, difficulties and successes of institutional development efforts in Latin America. The University of Los Andes in Bogota was selected for the first true institutional development effort

in DARSS in Latin America. The Faculty of Economics at Los Andes and its Center for Economic Development Studies (CEDE) were to be models for both teaching and research in demography and related social science. Los Andes was thought to have all the necessary ingredients to serve as a showcase for the hemisphere, including an able administration, well-trained academic staff, stability and a good base in the social sciences. International fellowships were begun in 1966 and between 1968 and 1971, under the intellectual leadership of Alvaro Lopez Toro, demographic studies and research flourished at CEDE. Important research contributions emerged but the institutional development of demography at Los Andes never became a showcase. Teaching was limited to undergraduates and it did not produce its own well-trained professionals. Unfortunately, its success in research was short lived, and in contrast to this promising beginning, today demography is almost nonexistent at Los Andes.

The reason for this failure, is ironically, related to its rapid growth and development. The program at CEDE was built on the preparation abroad of a cadre of young professors, and a research and undergraduate teaching program, on their return, under the direction of a star demographer of international renown: Alvaro Lopez Toro. When he left Los Andes the program collapsed as the young staff could not sustain it and the undergraduates were not committed to it. During his tenure at CEDE, Lopez Toro had had problems with other faculty members stemming from the special conditions of his contract. Also, the faculty itself had not been sufficiently attracted to or incorporated into the program. Differences led to Lopez Toro's resignation from CEDE (later he died). At first it was felt that for the program to survive, someone of the caliber of Lopez Toro had to be found. Simultaneously, graduating students applying for Population Council funded faculty development scholarships were unclear as to what they could expect on their return to the CEDE program of studies, and the faculty did not

help to make things clearer. Furthermore, a few of the selected fellows were told that they would have to take only one or two demography courses, and some lost their commitment to population studies instead of finding it strengthened after they began graduate studies.

The Los Andes experience is extremely valuable to institutional development efforts in Latin America. Demography at CEDE was not well integrated within a main field, in this case economics. Additionally, it lacked the necessary grass roots support within the larger university community. In bringing a well known demographer from the outside - even though a Colombian national - demography was also exposed to faculty rivalry and student antagonism. Furthermore, the demography program never did get a chance to become self-sustaining since it needed the umbrella of a graduate department in order to grant degrees. International organizations carrying out institutional development efforts in Latin America must realize that demography is a "sub-field" that is most comfortable and secure within an economics or sociology program. Thus, the support of a major department and its faculty is essential. Efforts aimed at creating equal status with other major disciplines can only invite disaster.

While demographic teaching efforts in Colombia are modest, population research exhibits an unusually healthy development pattern. ASCOFAME, the Colombian Association of Medical Schools has played a major role in the development of interest and professional sophistication in demographic research in Latin America and in population policy in Colombia. ASCOFAME's population interests started in 1964 with the establishment of a Division of Population Studies financed principally by the Ford Foundation. Population Council support began in 1968. The scope of its program was extremely wide and responsive to the nation's needs. Moreover, it carried on its work in a country which has held a traditionally conservative position regarding population and family planning.

The Division's research dealt with a wide range of demographic topics. Some of its best known studies are in the area of urbanization and migration, but fertility studies - especially those stemming from the National Fertility Survey - are also important contributions to the field. The Division's growth within ASCOFAME presented problems, such as its size and budget relative to the other divisions, and the overcautious attitude of ASCOFAME's board with regard to formal publication of research findings. The political sensitivity of the latter issue and the implications of some of the research led to a backlog of finished yet unpublished research. During nearly a decade of growth and success, the Division spun off to other organizations many of the activities it pioneered. Then in the spring of 1973, after a gestation period of over 2 years, it produced a new organization. The Regional Population Center which was created under the leadership of Dr. Guillermo Lopez Escobar, formerly the head of the Population Division at ASCOFAME, as a portion of the Division split off.

The Regional Population Center now represents a consolidation of many diverse population activities within a single organization including studies of internal and external migration, fertility (including participation in the World Fertility Survey), population distribution, evaluation of family planning programs, communications and education programs in population, family life and sex education, collection of family planning program service data, computer modeling of the interaction between population and economic factors, policy studies, and others. The center conceives its functions as including training, evaluation and diffusion of information activities in addition to research. The training component will concentrate on short-term activities, specialized seminars and courses. The Council's commitment to this center is strong and the formulation of plans for the development of demographic training in Colombia cannot overlook the reservoir of professional talent presently at this institution.

The Colombian experience indicates that after a population research tradition has been well solidified and established, the country's academic institutions may be ready, and in fact request funds, for the development of demographic training programs in a few selected locations. The Universidad Javeriana is launching a multidisciplinary graduate training program in the social sciences offering four major orientations of which one is expected to be demography. The Universidad del Valle in Cali has an Interdisciplinary Population Studies Center with limited staff in the social sciences but plans are to expand in this direction. An area of interest here is population policy (a program under the auspices of COLCIENCIAS - the Colombian Fund for Scientific Research) the purpose of which is to study the development and formulation process of population policy in Colombia.

Thus, while the initial push for demographic training in Colombia did not result in a permanent program at Los Andes, it cannot be said that it has been wasted. Indeed the fact that so much population activity occurs today in a country like Colombia speaks well of the Council's efforts and indicates that the manpower trained in earlier failures were stepping stones to present successes.

Another South American country where institutional development efforts in demography and related social science have been aided by the Population Council is Peru. At Cayetano Heredia - a prestigious medical and science-oriented university which separated from the University of San Marcos some eight years ago - a number of research and training activities, some related to the social sciences, are under way. This university is regarded as Peru's leading medical school, which in addition to its regular teaching programs, operates the Rimac Hospital and is in charge of the Institute of High Altitude Studies which has carried on a mixed program of biomedical studies, pilot family planning clinic operation, and KAP studies and social research in the community of Cerro de Pasco.

More important from a social science perspective are the two-year postgraduate programs at Lima's Catholic University, also a prestigious private institution with an enrollment of about 6,000 students. A history of academic stability, a functioning research center, and a strong undergraduate social science program developed early with assistance from the Dutch government, prompted both the Ford Foundation and the Population Council to cooperate in the development of Peru's first graduate program in sociology. With Council aid a social demographer was hired who taught and supervised students with a specialization in demography. Of the 20 students enrolled in the first cycle of the M.A. in sociology program, three chose demography as their major field of study and two successfully completed the program on time. Demography has its own sequence of courses but the specialty is well integrated within sociology.

The sociology effort is funded by the Council and by the Ford Foundation but given the difficulty in hiring qualified demographers, Council funds have been used to hire social scientists with population interests who would fit any of the major emphases of the program including industrial, urban and political sociology. The program has a strong international faculty including sociologists and anthropologists with Ph.D.s from Brown, Cornell, Heidelberg and Wisconsin among others. Demography has been the secondary emphasis of the program and there are doubts that the university would support it should the external funding stop now before the Peruvians selected for staff development awards have returned. In addition, there has been some opposition to the further expansion of the demographic component among the faculty. On the other hand, 13 of the students selected for the second two-year cycle chose population studies. Funding is likely to be required for several more years to insure the continued vigor of this activity. A sister program in the Economics faculty is programmed to begin its first two-year cycle in 1975, with little or no special assistance for its

demographic portion.

Brazil's well known pro-natalist position has had the effect of postponing commitment within the university community to population studies. Brazil's intention is to double its 100 million inhabitants within the next 25 years or so in order to expand its labor force, its internal market capacity and to continue its present momentum of economic development. But Brazil is concerned also with questions of population distribution and redistribution, migration and urbanization. It thus permits family planning services to be provided widely by a private foundation and has granted it special tax-exempt status which greatly assists its fund raising in the country.

The Population Council has been supporting demography courses offered within a graduate program on urban studies at the State University of Campinas' Institute of Philosophy. This Institute houses the social sciences and offers two M.S. level programs: one in social anthropology, and another in linguistics. Demography is being offered as a core course and as an integral part of a new sociology M.A. program focusing on the urban development of Brazil and internal migration. This program has just enrolled its first cohort of students.

The Center for Regional Planning (CEDEPLAR) of the Department of Economics at the Federal University of Minas Gerais offers with Population Council assistance, a demographic specialty within their master's degree program on regional economics. This program started in 1974, therefore it is too early to report on its progress. CEDEPLAR has the strongest economics department in Brazil, has a staff of 21, and a number of its faculty have or are getting Ph.D.s from universities abroad. An important characteristic of this group has been their interest in demographic research ever since the M.A. in economics was launched in 1969. Migration, labor force and fertility research (and theses) had been conducted and reported prior to the Council's funding of a formalized training

program concentrating on the economic aspects of demography.

CELADE and El Colegio de Mexico offer the only master's degree in demography in Latin America. El Colegio de Mexico has just initiated a Ph.D. program in sociology and expects to add Ph.D.s in demography, political science, and urban development. Although few of the master's students have written their theses, the 35 or so students who have completed their course work have already moved into important governmental positions.

El Colegio de Mexico opened its program in Economics and Demographic Studies in 1964, offering two high quality two-year master's programs in these two areas. It has since become the leading Mexican institution in demographic research and training, and publisher of Economía y Demografía, a quarterly journal of international reputation. El Colegio offers the only graduate level demography program in Mexico. The Economics and Demography Studies Center serves as a catalyst and resource base for other institutions and is often consulted by provincial universities. Its annual budget is $350-400,000. Both the Rockefeller and Ford Foundations have been the main sources of external aid with occasional research funds from the Population Council. El Colegio de Mexico is today one of the outstanding social science centers in Latin America. Its high caliber faculty, its political stability, its influence with the Mexican government, and the interest of its president, Victor Urquidi, make El Colegio de Mexico one of the pivotal centers for the future of demography and social science development in Latin America.

CELADE, the Latin American Demographic Center, also a recipient of Council assistance, initiated teaching in demography in 1958 when the field was unknown in Latin America. CELADE undertook to attract international students to an essentially unfamiliar discipline with a then undefined employment market. By the end of the first ten years, however, 160 fellows from 20 Latin American

countries had received training ranging from the ten month "basic" course to three year residencies which involved participation in CELADE's training and research programs. By the end of 1972, 261 Latin Americans who attended either the Costa Rica sub-center or the main program in Santiago had completed the basic course. The impact of CELADE in training personnel in demography has been felt throughout the continent and many of those who attended its courses have become, in their own countries, leaders in the effort to introduce demography into university programs.

Until 1973 there was still no formal academic degree offered by CELADE. In August of that year, however, it became possible for an entering student at the University of Chile to work toward a master's degree in economics with specialization in demography. Only persons with bachelor's degrees in economics are eligible. Non-Chilean students can receive financial assistance through CELADE and the United Nations Fund for Population Activities.

Although the Council's record is mixed, it is impressive, and the Population Council remains in a uniquely advantageous position to contribute to the success of university programs in demography and related social sciences in Latin America. The Council's long experience in the region, its professional standing, its relatively small size, its ability to deal with problems as they arise and in a flexible manner, have made it a highly respected institution among the Latin American intellectual and academic community concerned with the implications of demographic factors for development. Success in the future will depend largely on the Council's ability to maintain that image, especially its flexibility, since the area's suspicions and hostility toward North American efforts at accelerating the process of social change are once again, after a lull in the early 1960s, noticeable. The volatile subject of population - in any of its facets - requires sensitivity and patience on the part of international donor

agencies.

VI. Institutional Development in DARSS
C. A Strategy for the Next Ten Years

Institutional development, to be effective, must respond to local initiative and to local needs rather than to impose, upon recipient institutions, models that reflect the view of the donor agency, and in some cases, that of the United States. Institutional development must be understood as a partnership which allows both - the granting and the grantee institution - to work out on an equal basis the arrangements that best suit a particular situation. Institutional development normally must strive to reinforce and strengthen existing institutions rather than build new ones. In some cases it might sustain an institution during a transitional period. The granting agency must make every effort to develop communication avenues that remain open at all times during the grant period and emphasize the fact that human as well as financial resource-utilization may be involved in the exchange. In addition to monitoring grant progress by the donor agencies it may be mutually beneficial to supplement observation by participation.

The confused pattern in the development of the social sciences in Latin America naturally has important implications for the institutional development of population studies. Conflicting situations, abrupt political change, zig-zagging ideological positions, student unrest (always latent and often manifest) are part of the Latin American scenario. To circumvent these problems there is always a temptation to invest in "safe," small, private, and oftentimes elitist institutions whose impact on the total academic scene will not occur rapidly. Given that the great majority of Latin America's largest universities are public institutions, donor agencies must allocate a portion of their investment to high-risk, "unsafe" undertakings, at least on an experimental basis. The ultimate goal of institutional development is to aid the development process itself by

increasing a society's capacity to find the answers to some of its vital policy questions - of which population is one. Given that the larger universities are often the most highly politicized it is safe to assume that they are also preparing future leaders whose basic political training takes place on the campus. The dilemma between risk and impact is obvious; the challenges to institutional development formidable, but if the opportunity arises, international donor agencies must exercise maximum flexibility and vision.

Strategy Levels

Institutional development seeks to remove inadequacies in trained manpower as it relates to specific fields and to increase the expertise to conduct analyses of particular (development) problems. The need for DARSS institutional development in Latin America is related to the study of rapid population growth, migration, age structure, manpower and employment, and fertility. Mortality has relatively low saliency in countries where death rates achieve or have achieved the levels of industrialized nations.

Population concerns vary throughout the region. In Argentina, the government is trying to reverse a trend of low population growth rates; in Brazil, the doubling of the present population is seen as necessary for sustained economic development; while Mexico has announced a policy to curtail high growth rates as a means to the same end. Central America with the world's highest growth rates for any sub-region is somewhat ambivalent. Overall, only a few of the Latin American countries (Colombia, Dominican Republic and Mexico) have adopted policies to lower their demographic growth. How should an institutional development strategy be devised given these circumstances?

The best strategy is one that derives priorities for action from a combination of factors. Population size and population growth rates are two key

demographic determinants. Countries of large size and rapid growth - despite their official stand on the population issue - deserve special attention. Smaller countries with very high rates of growth must be aided in their quest to gain a better understanding of the implications that rapid growth has for their economic development.

Next among these factors is geographic diversity seen from both a macro and a micro perspective. In some areas of low priority students interested in demography could be given fellowships to attend an established program in a neighboring country. Ecuadorian students could go to Colombia or Peru for graduate studies etc. Most South Americans could attend a Brazilian university for doctoral studies and Mexico is an excellent alternative for tropical South America and Central America. In smaller nations a centralized strategy to develop one institution should be preferred while in the larger countries a decentralized effort could stimulate different orientations.

Lastly, the programmatic level is related to the demographic and to the geographic criteria. We make no effort to emphasize disciplinary orientations as these will vary from country to country and must be considered on an ad hoc basis. What is important is to ward against the overdevelopment of graduate DARSS programs in Latin America. This could only lead to their being of poor quality and high instability. These programs, wherever they are developed, should be consonant with the level and status of the social science discipline to which they are attached. They should aim at creating a healthy balance between cooperation and competition while avoiding any claim to preferred status or scientific uniqueness. One of the goals of institutional development is permanency which is often the most elusive to attain.

Based on these factors the following list of priorities emerge:

1. High priority for doctoral program development - Mexico and Brazil

2. High priority for master's level (or professional level) program development - Peru, Mexico, Brazil, Colombia

3. Medium priority for master's level programs - Venezuela, Chile, Costa Rica

4. Medium priority for efforts at undergraduate level - Dominican Republic, El Salvador, Guatemala

(For additional data on how these groups were arrived at see Figure 1).

These four categories imply the development - over the next ten years or so - of two doctoral level programs, seven master's level programs (in Brazil, Mexico and Peru these are already in effect but it is anticipated that additional programs in the first two countries will be launched), and three or perhaps more grants for the development of undergraduate courses. To the international funding agencies, even a modest list such as this presents an enormous challenge in terms of human and financial resource allocation. The list should be viewed as a prescription for the future and as a gross estimate of the magnitude of the effort involved. As an alternative, and as a means of carefully orchestrating a gradual but slow increase in the investment of institutional development in DARSS, a major fellowship program to allow Latin Americans to study within the region should be developed. This would have the advantage of strengthening the more promising institutions by enlarging their recruitment base and meeting the demand for demographers as it grows in Latin America.

FIGURE 1 A STRATEGY FOR INSTITUTIONAL DEVELOPMENT IN LATIN AMERICA BASED ON POPULATION SIZE, GROWTH RATES, GEOGRAPHIC AND PROGRAMMATIC DETERMINANTS

Country	Population		Geographic Diversity		Programmatic Level				Level of Priority for I.D. Action
	Size	Growth	Regional	National	D	M	U	X	
Mexico	A	H	H	D[1]	*	*	*	-	H
Brazil	A	M	H	D[1]	*	*	*	-	H
Colombia	B	H	H	D	-	*	*	-	H
Peru	B	H	M	C	-	*	*	-	H
Venezuela	B	H	M	C	-	*	*	-	M
Argentina	B	L	L	-	-	-	-	*	L[2]
Chile	B	L	L	C	-	*	*	-	M[2]
Dominican Rep.	C	H	M	C	-	-	*	-	M
Ecuador	C	H	L	C	-	-	*	-	L
El Salvador	C	H	L	C	-	-	*	-	M[3]
Honduras	C	H	L	C	-	-	*	-	L
Bolivia	C	M	L	C	-	-	*	-	L
Guatemala	C	M	M	C	-	-	*	-	M[4]
Haiti	C	M	L	C	-	-	*	-	L
Cuba	C	L	-	-	-	-	-	*	L
Uruguay	C	L	-	-	-	-	-	*	L
Paraguay	D	H	L	C	-	-	*	-	L
Surinam	D	H	L	C	-	-	-	*	L
Costa Rica	D	M	H	C	-	*	*	-	M[5]
Guyana	D	M	L	C	-	-	-	*	L
Nicaragua	D	M	L	C	-	-	*	-	L
Panama	D	M	L	C	-	-	*	-	L[6]
Jamaica	D	L	M	C	-	*	*	-	L
Trinidad	D	L	L	C	-	-	*	-	L

NOTES

POPULATION: Size Class: A = 50 million or more inhabitants
B = 10-49 million
C = 3-10 million
D = Under 3 million

POPULATION: (Continued)

Rate of Growth: H = 3.0 percent per year or higher
M = 2.0 - 2.9 percent per year
L = Less than 2.0 percent per year

GEOGRAPHIC DIVERSITY:

Regional: H = indicates high priority area on a regional basis
M = medium priority area
L = low priority area

National: D = indicates programs should be developed in a decentralized form (except the Ph.D.). Provinces or states could establish different programs with different orientations.

C = indicates concentration is best strategy

PROGRAMMATIC LEVEL:

D = Doctoral program can be developed
M = Master's level programs should be highest level for DARSS institutional development
U = Undergraduate courses only, country not ready for higher level programs
X = Indicates low priority for institutional development at all levels

FOOTNOTES:

1. Does not apply to doctoral programs. One in Mexico and one in Brazil is probably all that Latin America may need for a long time.

2. Political events in Chile must be observed since the country's tradition of research and interest in population has been high.

3. Its high density makes the population problem acute here and interest in DARSS is high.

4. Past attempts to develop DARSS programs have been short lived but future directions and options are presently under study by a local university.

5. Country has established tradition of population research and institutional capacity is promising.

6. Country has increased interest in developing DARSS programs.

FOOTNOTES:

1. Alfonso Ocampo Londoño, Higher Education in Latin America: Current and Future, International Council for Educational Development, Occasional Paper Number 7 (New York: June 1973), p. 38.

2. Ibid., p. 9.

3. Harold R. W. Benjamin, Higher Education in the American Republics (New York: McGraw-Hill, 1965), p. 15.

4. Among the universities that have been founded in the recent past the following are important to mention: Universidad del Valle in Cali, Colombia (1945); the University of Sao Paulo (1934); the Federal University of Rio de Janeiro (1935); the University of Brasilia (1961); the Catholic University of Ecuador (1946); the Catholic University of Lima, Peru is somewhat older (1917); the State Technical School in Chile and many of the provincial universities of Mexico (and of other countries) are also of recent vintage. For more details see: Ibid., pp. 18-30.

5. Roughly speaking, the last two years of high school would provide the equivalent of the first two years of an American college, and the university would concentrate only on what is known in the U.S. as the major field of study.

6. Op. cit., Londoño, pp. 15-16.

7. Richard N. Adams, "VI Assembly of CLACSO, Mexico City, November 6-8, 1972," Latin American Studies Association Newsletter, vol. 3, no. 4, December 1972, pp. 26-32.

8. Gabriel Gyarmati K., "The Social Sciences in Chile: Professionalization, Codes of Ethics and Ideological Confrontation," International Social Science Journal (Paris: UNESCO, 1974), vol. 26, no. 1., pp. 152-155.

9. Rolf J. Luders, "Social Science Research in Latin America." Mimeographed paper prepared for a meeting on social science research on development, February 13-15, 1974, Italy (Washington, D.C.: OAS, January 1974), p. 5.

10. Ibid., p. 1.

APPENDIX: DEMOGRAPHIC AND SOCIAL STATISTICS ON LATIN AMERICA

TABLE 1. POPULATION AT LATEST CENSUS, 1973 MIDYEAR POPULATION ESTIMATE, ANNUAL RATE OF POPULATION GROWTH, NUMBER OF YEARS TO DOUBLE POPULATION, POPULATION PROJECTED TO 1985

Region and Country	Latest Census Date	Latest Census Population	Population Estimates Mid 1973 (in millions)	Annual Rate of Population Growth (percent)	Number of Years to Double Population	Population Projected to 1985 (in millions)
LATIN AMERICA			308.0	2.8	25	435
Tropical South America			165.0	3.0	23	236
Bolivia	1950	2,704,165	5.0	2.4	29	6.8
Brazil	1970	93,204,379	101.3	2.8	25	142.6
Colombia	1964	17,484,508	23.7	3.4	21	35.6
Ecuador	1962	4,649,648	6.7	3.4	21	10.1
Guyana	1970	714,000	0.8	2.8	25	1.1
Peru	1972	13,567,939	14.9	3.1	23	21.6
Surinam	1964	324,211	0.4	3.2	22	0.6
Venezuela	1971	10,721,522	11.9	3.4	21	17.4
Central America (Mainland)			75	3.2	22	112
Costa Rica	1963	1,336,274	2.0	2.7	26	3.2
El Salvador	1971	3,549,260	3.8	3.2	22	5.9
Guatemala	1964	4,287,997	5.6	2.6	27	7.9
Honduras	1961	1,884,765	3.0	3.2	22	4.6
Mexico	1970	48,225,238	56.2	3.3	21	84.4
Nicaragua	1971	1,911,543	2.2	2.9	24	3.3
Panama	1970	1,428,082	1.6	2.8	25	2.5
Temperate South America			41	1.7	41	51
Argentina	1970	23,362,204	25.3	1.5	47	29.6
Chile	1970	8,834,820	10.4	1.7	41	13.6
Paraguay	1962	1,819,103	2.7	3.4	21	4.1
Uruguay	1963	2,595,510	3.0	1.4	50	3.4
Caribbean			27	2.2	32	36
Bahamas	1970	175,192	0.2	4.6	16	0.2
Barbados	1970	238,141	0.3	0.8	87	0.3
Cuba	1970	8,553,395	8.9	1.9	37	11.0
Dominican Republic	1970	4,006,405	4.8	3.4	21	7.3
Haiti	1971	4,243,926	5.6	2.4	29	7.9
Jamaica	1970	1,865,400	2.1	1.5	47	2.6
Trinidad and Tobago	1970	945,210	1.1	1.1	63	1.3

Sources: Demographic Yearbook 1972 (New York: United Nations, 1973), pp. 121-122.
1973 World Population Data Sheet (Washington, D.C.: Population Reference Bureau, Inc.).

TABLE 2. ESTIMATED BIRTH AND DEATH RATES: 1945-1950, 1955-1960 AND 1965-1970

Region and Country	Births per 1000 population			Deaths per 1000 population		
	1945-1950	1955-1960	1965-1970	1945-1950	1955-1960	1965-1970
LATIN AMERICA						
Tropical South America						
Bolivia	41-45	41-45	44	23-27	20-25	19
Brazil	43-47	43-47	38	17-23	11-16	10
Colombia	44-47	43-46	45	17-21	14-17	11
Ecuador	45-50	45-50	45	20-25	15-20	11
Guyana	...	...	38*	...	...	7*
Peru	42-48	42-48	42	18-24	13-18	11
Surinam	...	...	41*	...	...	7*
Venezuela	44-48	45-50	41	16-20	10-15	8
Central America (Mainland)						
Costa Rica	44-48	45-50	45	12-16	9-13	8
El Salvador	44-48	44-48	40*	18-23	14-18	10*
Guatemala	48-52	48-52	41*	22-27	20-24	15*
Honduras	45-50	45-50	49	18-24	15-20	17
Mexico	44-48	44-47	41	17-20	13-16	10
Nicaragua	45-52	45-52	46	16-20	12-17	17
Panama	38-42	39-42	41	14-17	9-13	9
Temperate South America						
Argentina	25-26	23-24	22*	9-10	8-9	10*
Chile	34-37	35-38	30*	17-19	12-13	9*
Paraguay	45-50	45-50	45	15-20	12-16	11
Uruguay	20-23	19-22	22	8-9	7-9	9
Caribbean (selected countries)						
Bahamas	...	...	25*	...	...	6*
Barbados	...	...	21*	...	...	9*
Cuba	32-36	30-34	27	11-15	9-13	8
Dominican Republic	48-54	48-54	49	20-25	16-20	15
Haiti	42-50	42-50	44	25-30	20-28	20
Jamaica	...	...	34*	...	...	7*
Trinidad and Tobago	...	...	25*	...	...	7*

* For 1970 or latest available year.

Sources: Economic Commission for Latin America, Boletín Economico de América Latina, Suplemento Estadístico, Vol. VII, no.1 (October 1962), Table 4; Demographic Yearbook 1972, (New York: United Nations, 1973), pp. 134-135, 474-475, 527-529. Demographic Yearbook 1970 (New York: United Nations, 1971), pp. 120-121.

TABLE 3. LATIN AMERICA: TOTAL FERTILITY RATE, GROSS REPRODUCTION RATE, NET REPRODUCTION RATE, AND FEMALE EXPECTATION OF LIFE AT BIRTH: 1965 - 1970 FOR SELECTED COUNTRIES

	Total Fertility Rate	Gross Reproduction Rate	Net Reproduction Rate	Female Expectation of Life at Birth
LATIN AMERICA	5.5	2.7	2.3	62.5
TROPICAL SOUTH AMERICA	5.7	2.8	2.3	61.5
Brazil	5.4	2.6	2.2	63.0
Colombia	5.6	2.7	2.2	60.0
Peru	6.4	3.1	2.5	59.0
Venezuela	6.0	2.9	2.6	68.0
CENTRAL AMERICA (MAINLAND)	6.4	3.1	2.6	62.5
Mexico	6.5	3.2	2.7	64.0
El Salvador	6.6	3.2	2.5	57.0
Honduras	6.6	3.2	2.6	60.0
Costa Rica	6.0	2.9	2.6	68.0
TEMPERATE SOUTH AMERICA	3.7	1.8	1.6	66.5
Argentina	3.0	1.5	1.3	70.5
Chile	3.8	1.9	1.6	64.0
CARIBBEAN	4.9	2.4	2.0	60.0
Cuba	4.5	2.2	2.0	68.5
Dominican Republic	7.2	3.5	2.8	57.0
Trinidad & Tobago	3.8	1.9	1.7	68.0
Puerto Rico	3.4	1.7	1.5	72.0

Source: Tomas Frejka, The Future of Population Growth: Alternative Paths to Equilibrium (New York: Wiley, 1973), Table 5-18, p. 129.

TABLE 4. POPULATION ESTIMATES: 1920-1985

Region and Country	1920	1930	1940	1950	1960	1970	1975	1980	1985
LATIN AMERICA				(Population in Thousands)					
Tropical South America[1]	45,639	54,494	66,767	83,516	111,826	150,660	175,160	203,591	235,946
Brazil	27,554	33,718	41,525	51,976	69,730	93,029	107,262	123,717	142,564
Colombia	6,089	7,280	9,097	11,334	15,397	21,363	25,448	30,238	35,645
Peru	5,313	5,752	6,784	7,969	10,025	13,587	15,870	18,529	21,614
Venezuela	2,438	2,980	3,740	5,330	7,740	10,755	12,736	14,979	17,350
Ecuador	1,930	1,930	2,102	2,546	3,231	6,089	7,203	8,526	10,083
Bolivia	1,864	2,153	2,508	3,013	3,696	4,658	5,272	6,006	6,833
Guyana	295	309	344	423	564	744	859	993	1,145
Middle America (Mainland)[2]	19,443	22,456	26,863	35,393	48,240	67,340	79,938	94,706	112,094
Mexico	14,500	16,589	19,815	26,282	36,046	50,710	60,237	71,375	84,431
Guatemala	1,450	1,771	2,201	2,858	3,820	5,111	5,898	6,822	7,913
El Salvador	1,168	1,350	1,550	1,922	2,512	3,454	4,107	4,922	5,929
Honduras	783	948	1,146	1,445	1,940	2,704	3,214	3,832	4,569
Nicaragua	600	700	825	1,133	1,501	2,021	2,373	2,818	3,347
Costa Rica	421	499	619	849	1,233	1,798	2,182	2,650	3,196
Panama	447	523	620	795	1,062	1,468	1,737	2,068	2,464
Temperate South America	14,826	18,877	22,319	26,671	32,806	39,378	42,936	46,731	50,712
Argentina	8,861	11,896	14,169	17,085	20,850	24,304	26,062	27,830	29,559
Chile	3,785	4,365	5,063	6,058	7,683	9,780	10,937	12,214	13,609
Uruguay	1,479	1,734	1,974	2,196	2,540	2,886	3,063	3,247	3,443
Paraguay	699	880	1,111	1,330	1,731	2,406	2,872	3,437	4,099
Caribbean[3]	9,666	11,591	13,891	16,795	20,550	25,785	28,800	32,145	35,888
Cuba	2,950	3,837	4,566	5,600	6,905	8,392	9,205	10,068	10,962
Haiti	2,124	2,422	3,827	3,380	4,138	5,229	5,956	6,838	7,894
Dominican Republic	1,140	1,400	1,759	2,272	3,088	4,292	5,117	6,118	7,321
Jamaica	855	1,009	1,212	1,385	1,629	1,996	2,199	2,382	2,568
Trinidad and Tobago	389	405	510	632	831	1,070	1,164	1,253	1,335
Barbados	155	159	179	211	233	256	263	262	251

1. Includes Surinam and French Guiana.
2. Includes British Honduras.
3. Selected nations, total includes all islands of area.

Source: For 1920-1940 estimates, United Nations, World Population Prospects as Assessed in 1963 (New York: 1966), pp. 143-144. For 1950-85 estimates, United Nations, Total Population Estimates for World, Regions and Countries, Each Year, 1950-1985, ESA/p/wp.34 16 October 1970 (internal document, not yet published).

TABLE 5. NUMBER OF COUNTRIES AND DISTRIBUTION OF THE POPULATION IN THE MAJOR REGIONS OF THE DEVELOPING WORLD, BY GOVERNMENT POSITION ON POPULATION GROWTH AND FAMILY PLANNING, 1973

Government Position[a]	All developing countries[b]	Africa	Latin America[c]	Asia and Oceania[d]
		Number of countries		
All positions	118	47	29	42
Official policy to reduce the population growth rate	33	7	7	19
Official support of family planning activities for other than demographic reasons	30	11	14	5
Balance: no policy to reduce the growth rate and no support of family planning activities	55	29	8	18
		1973 population (in millions)		
All positions	2,742	375	308	2,059
Official policy to reduce the population growth rate	2,056	81	90	1,885
Official support of family planning activities for other than demographic reasons	441	194	170	77
Balance: no policy to reduce the growth rate and no support of family planning activities	245	100	48	97
		Percent distribution of population		
All positions	100	100	100	100
Official policy to reduce the population growth rate	75	22	29	91
Official support of family planning activities for other than demographic reasons	16	52	55	4
Balance: no policy to reduce the growth rate and no support of family planning activities	9	26	16	5

a. Government positions are based on the latest information available, and population data are estimates for 1973.

b. Development status is based primarily on stage of economic development. For more details see footnote c, below.

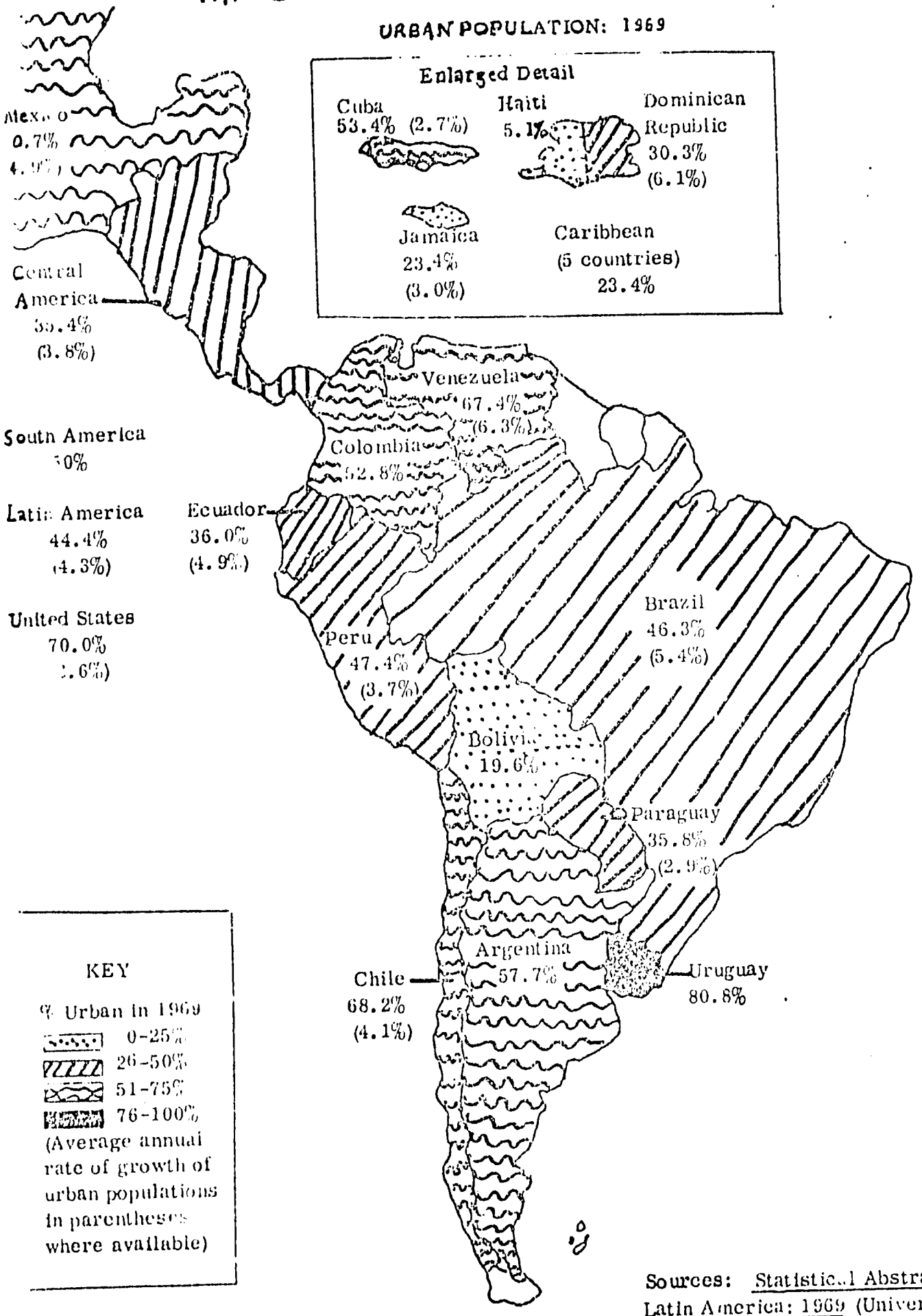
c. Includes the Caribbean area plus Central and South America, but excludes Argentina (25 million) and Uruguay (3 million), both of which have low fertility.

d. Excludes Japan (108 million) and Israel (3 million), which have low fertility. Includes Melanesia, Polynesia, and Micronesia in Oceania (4 million).

Source: Data derived from United Nations, 1974, Population and Vital Statistics Report, Series A, 26, no. 2(1 April), with population data adjusted where necessary to yield 1973 estimates.

TABLE 6

URBAN POPULATION: 1969



Sources: Statistical Abstract of Latin America: 1969 (University of California: Los Angeles, 1970), Table 9
Compendium of Social Statistics: 1967 (United Nations: New York, 1968), Table I.

ILLITERACY*

	Percentage illiterate	Number of illiterates
Haiti	89.5	1,718,000
Guatemala	70.6	1,138,000
Bolivia	60.0	1,109,000
Honduras	55.0	541,000
El Salvador	51.0	707,000
Nicaragua	50.2	399,000
Brazil	38.9	16,857,000
Peru	38.9	2,182,000
Venezuela	36.7	1,499,000
Dominican Republic	35.5	569,000
Ecuador	32.7	810,000
Colombia	27.1	2,527,000
Panama	26.7	162,000
Paraguay	25.5	250,000
Mexico	23.8	7,722,000
Jamaica	18.1	171,000
Chile	16.4	730,000
Costa Rica	15.7	110,000
Uruguay	9.4	175,000
Argentina	8.6	1,190,000
Latin America: average	36.5	
total number		40,566,000
United States	2.2	2,619,000

* Listed in descending order of percentage illiterate.

Source: UNESCO Demographic Yearbook: 1970 (United Nations: New York, 1971) Table 11.

TABLE 8.

Latin American Institutions of Higher Education: Enrollment by Fields of Study in Eighteen Countries, 1960-1965-1970

Fields of Study	Students (Thousands) 1960	1965	1970	Percentage Distribution 1960	1965	1970	Index Year 1960 = 100 1960	1965	1970
Humanities	51.6	91.4	118.7	9.8	11.0	13.4	100	177	365
Education	35.5	74.9	190.3	6.7	9.0	13.4	100	210	526
Fine Arts	32.4	34.5	72.7	6.1	4.1	5.1	100	106	224
Social Sciences	70.5	154.4	264.0(1)	13.4	18.5	18.6	100	219	374
Physical & Natural Sciences	16.9	31.4	54.4(1)	3.2	3.7	3.8	100	185	321
Engineering	75.9	111.9	206.6	14.4	13.4	14.7	100	147	272
Medical Sciences	107.4	137.4	185.4	20.5	16.5	13.2	100	127	172
Agriculture	13.8	30.9	54.8	2.6	3.9	3.9	100	223	297
Law	88.7	119.5	184.1	16.8	14.3	13.1	100	134	207
Basic Studies and Others	34.5	47.2	11.7	6.5	5.6	0.8	100	-	-
Total	527.2	833.5	1,412.7	100.	100.	100.	100	158	267

(1) 1969 Date

Source: Alfonso Ocampo Londoño, Higher Education in Latin America, ICED, Paper #7, 1973.

PART II

Fertility Regulation and Related Health Sciences

Chapter 6

GOALS AND POLICY FOR INSTITUTIONAL DEVELOPMENT IN FERTILITY REGULATION AND RELATED HEALTH SCIENCES

This section defines institutional development goals in those applied health sciences related to population and proposes a strategy for investing scarce resources in institutions.

The institutional development scene is briefly reviewed. An analysis of the regional situation in Sub-Saharan Africa, North Africa and the Near East, South and East Asia, and Latin America is provided in the four regional reports that follow. Country- and institution-specific information for fifty-one countries where health institutions have been surveyed is contained in the following volumes of this report.

I. GOALS

The theoretical base of institutional development or institution-building stems from the work done in the 1960's by the Inter-University Research Program in Institution-Building. Milton Esman developed a model for institution-building in which, in keeping with the times, the process was seen as a powerful agent for social engineering.[1,2]

We perceive several limitations in the model, among the most important of which are those reflecting the different international climate in which donor

---

1. Esman, Milton J. and Blake, Hans C.: "Institution-Building Research -- The Guiding Concepts." Inter-University Research Program in Institution-Building, Pittsburgh, Pennsylvania. Mimeo 1966.

2. Esman, Milton J.: "Some Issues in Institution-Building Theory," in Institution-Building: A Model For Applied Social Change. B. Wood Thomas et al. (editors). Schenkman Publishing Company, 1972, page 67.

and technical assistance agencies must work in the 1970's in contrast to earlier periods. The bias in the Esman model toward directed social change may exhibit a lack of sensitivity to prevailing cultural and political factors. In the current context of most developing countries, the model assumes a greater role for the "change agent" than may be feasible or desirable. The model is also largely based on the relationship between a single donor or change agent and a single host institution, whereas the multiplicity of donors in the population field today greatly limits the impact any single donor can have in guiding social change. Finally, the model does not offer enough flexibility of scale to meet the varied needs of the many institutions surveyed. On the other hand, the model and its further elaborations[3] are useful to the extent that they highlight the central role of indigenous leadership and commitment and the importance of the host institution's links with other institutions in its environment.

The main goal of institutional development in fertility regulation and the health sciences is to assist in the development of self-sustaining health institutions whose raison d'être will be to acquire knowledge in fertility regulation through their own research and the international experience, to disseminate such knowledge through the training of health personnel, and, ultimately, to bring such knowledge to bear on the population and health problems of the nations. Such a goal is purposely limited and, in the health field, does not necessarily aim at social engineering.

The acquisition and dissemination of knowledge in the area of fertility regulation refers in the present context to a variety of scientific facts whose relevance will vary in relation to the specific problems encountered by each country. In countries that are only beginning to recognize the impact of fertility

---

3. Bumgardner, Harvey L. et al.: "Institution-Building: Basic Concepts and Implementation." University Population Program, Position Paper 3, University of North Carolina, 1972.

on the health of their population and on their potential for development, the production of knowledge in assessing the interrelationships between fertility and health and fertility and development should provide the decision-maker with locally produced data on which to base his priorities. Where family planning is recognized as an individual right and supported for its health benefits, the acquisition of knowledge of contraceptive technology and its dissemination through the medical and paramedical professions, through auxiliary health and social workers and other community workers, is an essential approach. Where large-scale action programs are implemented for health or demographic reasons, certain knowledge is needed to plan, implement, and evaluate such programs. This requires knowledge of health planning; of health manpower development (including the training of health teams consisting of physicians, paramedical personnel, and auxiliary health workers in proportions related to national constraints and needs); of health administration, including family planning program administration and operational research; of epidemiology and health statistics; and of community health development. Dissemination of knowledge should not be restricted to traditional health personnel. It has been demonstrated (e.g., China, Cuba) that community workers can have a greater impact on the population's attitudes and utilization of services through their number and organization than can a limited number of highly trained health workers. The final aim is to expand and improve fertility regulation services. Consequently, knowledge should be directed not only at an understanding of the causes and consequences of excessive or unwanted fertility, but also at equipping the health or community worker to act on the problem at his particular level of action.

What institutions qualify for institutional development? We have

considered in this inventory those institutions that have training and/or research as their main function. Universities are considered the principal target institutions in most countries because of their traditional role as local sources of knowledge and their access to the elite through their training functions. However, less prestigious institutions, such as training schools for medical assistants, paramedical personnel, auxiliary health workers, and others, are considered where their product is essential to a particular country. Not only is potential to respond to existing needs considered, but also potential to increase demand for fertility regulation. The output of these institutions is considered in terms of training, research, and, ultimately, services to be delivered by their trainees.

Training is by far the preferred output for most institutions considered. In several countries implicit conflict exists between governmental emphasis on training large numbers of workers and the faculty's aim of improving the quality of training through more research. Unfortunately, too often the faculty's own training in foreign institutions and their acceptance of training policies designed for other countries (Western Europe and the United States) make the "quality" of their training of limited relevance to the service needs confronting their trainees. In many institutions the remoteness of the faculty from large-scale delivery of services compounds the alienation of their teaching from local realities. One cannot help but wonder whether the Chinese decision to send university professors to work in rural areas was not a necessary preliminary for a realistic reorganization of the health delivery system.

Research implies the creation of knowledge of general or local importance. Because of national and linguistic barriers, too often knowledge is not accepted until it has been demonstrated locally. In some countries, through testing of local applicability, it may involve the rediscovery of knowledge

already existing in other countries. Not infrequently, available general knowledge is not applicable in certain countries because of widely divergent conditions. Among institutions surveyed, research has consistently been given less emphasis in almost every country compared with training. We refer here only to applied research and not to fundamental research for which only a handful of countries have sufficient financial resources and trained manpower (or a reward system designed to promote research) to contribute significantly in that field. In addition, applied research is felt to be a better investment for both the host countries and donor agencies and is more in keeping with local traditions and funding capacities.

Because the experience acquired from the delivery of services has so much relevance to training, every attempt should be made to involve training institutions in the delivery of services on a moderate scale to allow a two-way flow of knowledge.

In keeping with the above-mentioned goals, this inventory has implicitly assessed -- both in the regional and country reports -- faculty training and research plans in the light of their feasibility in a given country and of their relevance to action programs. Also, whenever feasible, we have attempted to define the unique role that outside donor agencies could play.

II. INSTITUTIONAL DEVELOPMENT SCENE

The institutional development scene is currently very rich in participants. In the health field, a number of governmental organizations, the Rockefeller and Ford Foundations, WHO and other United Nations family agencies, and the Population Council have acquired experience and implemented successfully tested programs. More recently, new participants have become involved in this field, and their actions need to be submitted to the test of time. Among them are eight United States universities (North Carolina, Johns Hopkins,

Michigan, Harvard, Chicago, Meharry Medical College, Hawaii, and the East-West Center) as well as other non-university organizations.

A recent paper has reviewed the population training needs of developing countries and the activities funded by the following agencies: United Nations Population Division, UNFPA, the World Bank, USAID, NICHD, SIDA, Ford Foundation, Rockefeller Foundation, and the Population Council.[4] The UNFPA has also undertaken a review of population assistance by all multilateral and bilateral agencies, and this document should be available in 1975.[5]

United Nations (UNFPA-WHO)

The United Nations efforts in demography and related social sciences and, in particular, the activities of the Population Division, are reviewed in the demographic and related social sciences section of this report. Between 1969 and the end of 1972, UNFPA provided a total of $16.3 million in support of population training activities, including institutional development. One quarter of it went toward support of national training institutions and slightly less than that proportion to fellowships. The UNFPA is currently supporting the introduction of family planning materials into medical school curricula and the training of family planning personnel in India, Korea, the Philippines, Singapore, Sri Lanka, Thailand, Iraq, and Tunisia. Expansion of such activities is contemplated in the 1972-75 work plan. Discussion has been underway in the UNFPA and the United Nations to establish multidisciplinary training programs for high

---

4. Mauldin, W. Parker and Baron, Barnett F.: "Donor Agencies and Population Training." Paper presented at the April 1974 meeting of the Population Association of America. New York, Population Council, 1974.

5. UNFPA: "Inventory of Population Projects in Developing Countries Around the World-1973." Forthcoming.

level personnel in government. Such programs would be located in two centers in developing countries.

The World Bank has so far funded nine population projects.[6] The largest part of these projects involve the expansion of national health infrastructures. Training is a significant component only in the Indian and Indonesian projects.

Both the Division of Family Health and the Division of Health Manpower Development of WHO have contributed to training in the health aspect of population as an integrated part of health manpower development. The Division of Health Manpower Development has developed programs in the following areas: educational communications, education planning, fellowships, health team development, health manpower planning, medical education, manpower in environmental health, nursing, and staff training. WHO program and budget proposals to UNFPA for 1975-77 recognize the need for the rapid development of knowledge and technology related to contraception, abortion, and sterilization, for new methods of service delivery, and for education and counseling as part of service delivery. The Division insists on the need to train and utilize auxiliary and non-health personnel if adequate coverage, especially in rural areas, is to be achieved. WHO is requesting from UNFPA for the 1975 period, $2,376,000 for staff and training at its headquarters and regional offices, $12,771,000 for interregional activities, and $7,422,000 for its inter-country projects (African region: $837,000; Americas: $2,945,000; Southeast Asia: $1,555,800; European Region: $326,000; Eastern Mediterranean Region: $782,000; Western Pacific Region: $974,000). WHO is making important contributions in the training and utilization of traditional birth attendants, in training teachers of midwifery, and

---

6. Baldwin, George B., Zaidan, George C., and Muncie, Peter C.: "The Population Work of the World Bank." Studies in Family Planning, Volume 4, Number 11, page 293, 1973.

in the training of health teams. The Division of Health Manpower Development has created, in Cairo, the first center for Educational Technology, which will build up a bank of educational material. Additional centers are being established in Mexico and Rio de Janeiro. An important activity has been the production and promotion of teaching materials specifically intended for auxiliary health personnel and their teachers (REMAHA Project). The Division of Health Manpower Development should be considered as a major source of teaching materials.

USAID

A major effort in institution-building has also been undertaken by USAID, both directly and through other agencies. Assistance to the School of Public Health at the University of Indonesia, among others, is an example of USAID direct support. The Population Council and United States universities (the University of North Carolina, in particular) have received generous support from USAID to assist foreign institutions in developing their capabilities in training and research in the field of population.

USAID has supported institutional development in population through individual training awards (475 in the United States and 183 in other countries for fiscal year 1973), grants to universities and other training institutions in developing countries, and substantial support to seven population centers in the United States.[7] In family planning, much attention has been given to training physicians in clinical and surgical methods of fertility regulation and in the supervision of paramedical and auxiliary workers. Assistance has been provided for the training of midwives, nurse-midwives, and nurses in family planning

---

7. Agency for International Development: "Population Program Assistance: United States Aid to Developing Countries, Annual Report, 1973," Bureau for Population and Humanitarian Assistance, Washington, May 1974.

clinical activities. In early 1974, USAID was aiming at the development of training/research institutions in fifteen countries over the next few years.

Among USAID-supported projects, mention should be made of the University of North Carolina's African Health Institutions Project. This project, implemented in cooperation with the Association of American Medical Colleges, will assist in institutional development by offering seminars, teaching institutes, short consultations, assistance in development of self-instructional materials, fellowships, and two Pan-African conferences over a five-year period. AID is supporting a program of "Training in Advanced Techniques for Management of Fertility" through a consortium made up of the Johns Hopkins University, the University of Pittsburgh, Western Pennsylvania Hospital, Washington University, St. Louis University, and the American University in Beirut. These courses are designed to provide physicians and their assistants with clinical skills related to reproduction and to support their home educational programs with equipment to allow them to use their new knowledge on health problems related to reproduction.[8] This could provide a base on which to develop training and research centers in fertility regulation in several universities overseas.

The Rockefeller Foundation

The Rockefeller Foundation has had considerable success with institution-building since the 1950's, in particular with international institutes of agriculture. Since the early 1960's, the Rockefeller Foundation provided technical assistance for overall university development to a few selected insti-

---

8. Department of Medical and Public Affairs, George Washington University Medical Center: "Family Planning Programs," Population Report, Series J, Number 3, November 1974.

tutions in developing countries.[9] Specific support for population activities has gone to the Universidad del Valle in Colombia, the College of Mexico, the University of Chile, Mahidol University in Thailand, Gadjah Mada University in Indonesia, Haceteppe University in Turkey, and the University of Ibadan in Nigeria.[10] The Rockefeller Foundation also provides for training in population in other ways, such as individual fellowship awards, research grants to universities, and grants to the Population Council for its fellowship program.

The Ford Foundation

The Ford Foundation has been a major supporter of population training, particularly in the United States, but also in the developing world. The Foundation's program priorities during the 1960's were to build individual and institutional capabilities in population/family planning and reproductive biology/contraceptive development through fellowship programs and support for population teaching and research programs and centers in the United States and abroad. Particular emphasis was placed on technical assistance to national family planning programs and to the development of specialized capabilities in population in emerging population centers.[11]

The Ford Foundation strategy in the mid-1970's, on the other hand, will be to move away from operational support for family planning programs and to stress improvement of management capabilities, particularly planning and evaluation, and the development of the communications and non-formal educational

---

9. Thompson, K.W.: "Higher Education for National Development: One Model for Technical Assistance," International Council for Educational Development, Occasional Paper Number 5, 1972.

10. See footnote 4.

11. See footnote 4.

aspects of family planning.

Unfortunately, United States population centers will receive reduced amounts of support from the Ford Foundation during the next few years because their total budget is declining and because it is assumed that other support is available (from NIH and USAID) and that the basic specialized competence has already been established at those institutions.

The Population Council

The Population Council provides training support in two ways: through its fellowship program (in the fields of demography, public health/family planning, and reproductive biology) and through grants for the development of population teaching and research programs, primarily in developing countries. Since the Council was organized, it has made grants for the development of population research and research programs to 79 institutions (Africa, 20; Asia, 35; and Latin America, 24), totaling approximately $19.6 million. The Council is currently providing support to 25 institutions, all of which include significant training activities.

The Council has awarded fellowships for advanced training in public health/family planning since 1961. Excluding the 1974-75 awards, the Council has given 1,396 fellowships to 964 individuals, 50 percent of them in demography, 20 percent in reproductive biology, and 30 percent in public health/family planning. We have invested a total of $8.4 million in fellowships and in 1974 we supported individuals in training at a level of about $925,000.

This institutional development report does not pretend to establish guidelines for the numerous funding agencies active in institutional development. The previous paragraphs merely attempt to outline the recent actions of major

donor agencies. Interested organizations will find in the individual country reports more specific information about institutional development potentials in specific countries and institutions on the basis of which they can decide where and how they can most effectively use their own resources.

Funding and technical agencies can play an important role in the field of institutional development. One of those roles is to identify institutions having the potential to sustain a core of teachers and researchers with relevant interests in the applied health sciences. In priority institutions, donor agencies can financially and technically support the development of training and research programs necessary for the self-sustaining implementation of effective family planning programs. Such support includes the provision of professionals and the training of local staff through international fellowships, preferably in their own country or region. The facilitation of institutions' access to relevant knowledge in the field is also an expected part of assistance. This includes the supply of journals, books, the organization of seminars and conferences, and the supply of teaching materials.

Coordination

The number of organizations and agencies participating in institutional development requires some coordinating mechanism for a more efficient use of resources and staff. Coordination has been difficult so far, however. Some of the existing mechanisms include:

1. The Bellagio Conference of heads of donor agencies,
2. UNFPA ad hoc technical advisory committee meetings,
3. United Nations interagency committees,
4. Committees on interdisciplinary training and population organized by the UNFPA,

5. Meetings organized by institutions in specific countries, with participants from the major donor agencies, and

6. An informal Institutional Development Coordinating Committee, which includes representatives of USAID, UNFPA, United Nations Population Division, World Bank, Ford Foundation, Population Council, and the Universities of North Carolina, Michigan, and Hawaii, and Johns Hopkins University.

III. POLICY

Before outlining criteria for assistance in institutional development, a rapid overview of the status of health and fertility regulation in the four regions surveyed in this inventory seems appropriate. The purpose of this summary is to sketch the differences in needs and priorities between the four regions.

Over half of the world's population live in East and South Asia, most of them in countries having policies to reduce population growth. The oldest and largest family planning programs are located in this region; in 1972, three-fourths of all acceptors worldwide (excluding China) were recruited by these programs. The traditions in medical education are old and the health institutions are generally well established, with long-standing experience in foreign assistance. Health institutions graduate large numbers of students (in fact, often too many for the existing local demand). This relative oversupply of physicians and nurses results in the emigration of significant numbers of health professionals.

In keeping with their old traditions, medical schools in several countries (Bangladesh, Taiwan, and, to some extent, India) were slow in introducing population-related programs in their curricula and even slower in orienting their research activities toward fertility regulation of potential relevance to national action programs. But by now, most countries have developed or are

developing programs to provide for their basic needs in fertility regulation, training, and research. No major new efforts are needed except perhaps in the archipelago countries such as Indonesia and the Philippines (as the family planning program reaches the peripheral islands) and in the better sharing of knowledge among countries. However, in order to reach rural populations, new delivery systems that better fit the low level of funding available in rural areas need to be tested. One model whose transferability certainly needs to be ascertained is the Chinese experience. While many of its features have already been tested in "pilot programs," the feasibility of transfer in toto is certainly worth exploring.[12]

Latin America has the highest population growth rate in the world, but governments were reluctant until recently to adopt policies to reduce birth rates. During the past five years, large-scale family planning programs have been implemented in some countries (Colombia, Chile, Costa Rica, Cuba, and Venezuela) and are being implemented in others (Mexico, Dominican Republic and, to some extent, Brazil). In general, the supply of physicians is adequate, but the relevance of their training to local needs is debatable. Although the medical schools have assumed responsibility in fertility regulation, training, and research, too often the North American emphasis on pathology rather than health has been adopted. The result is a manpower pool that needs major investments in infrastructures and whose high cost/effectiveness ratio restricts its availability to urban areas and to the better-off segments of society. If health and fertility regulation programs are to be provided to the whole population, particularly in

---

12. Pi-chao Chen: "The Planned Birth Program of the People's Republic of China, with a Brief Analysis of its Transferability." SEADAG Papers. The Asia Society, New York, 1974. Mimeograph.

rural areas, better evaluation, more widespread use of paramedical personnel, and increased delegation of tasks to lesser-trained health professionals appear to be prerequisites. More public health research and training are needed if proper deployment and supervision of paramedicals is to be achieved.

North Africa and the Middle East are even less homogeneous regions than the other three areas described in this report. While per capita GNP is in some countries among the highest in the world (Persian Gulf states and Libya), others share many characteristics with the poorer African countries (Sudan), and still others (Pakistan) could as well be included in the South Asia Report. Some countries have had large-scale family planning programs for a number of years (Arab Republic of Egypt, Pakistan, Tunisia, Turkey, Morocco), while others perceive themselves as underpopulated (Saudi Arabia) or consider family planning only as a health measure with low priority (Algeria). Most of the existing health training and research institutions were established by previous colonial powers, and their curricula still closely follow European models in spite of the fundamental differences in health needs and demands between Europe on one side and North Africa and the Middle East on the other. This situation has produced health graduates who are essentially oriented toward private practice. Consequently, universities have been remote from any large-scale health programs and unconcerned by the gross maldistribution of health services. Research in social medicine aiming at a better assessment of the health consequences of the present pattern of service delivery and the population growth rate are needed before fertility regulation programs are likely to have a measurable effect outside of the urban middle class.

In Sub-Saharan Africa, fertility regulation programs are, with a few exceptions, largely nonexistent. Only in the very recent past have the potential health benefits of family planning been recognized by governments and health

leaders. When fertility regulation programs are supported, it is almost always with a health rationale rather than a demographic one. The few moderate-scale family planning programs in existence today have had only marginal results. Medical education is generally of recent development and its product needs to pass the test of time. Institutions are hard pressed between their lack of resources and governmental policies to produce large numbers of graduates. Possibly because of the huge demand for their graduates, the newer African health institutions are experimenting with new curricula designed to train medical and paramedical graduates to be more responsive to community needs. Such experiments with health sciences curricula as well as health team training need to be encouraged. Local research on the relationships between fertility and health is still scarce and warrants support. Because of the impossibility of training and employing large enough numbers of physicians to provide adequate coverage to rural populations in the foreseeable future, priority should be given to training of paramedicals and community workers.

In view of the scarcity of resources for institutional development, the potential benefits of such investments as well as the existing needs should be taken into consideration before setting priorities among projects. While each donor agency will adopt its own guidelines, the following criteria seem valuable for policy-making:

1. The highest level of priority should be given to countries where excess fertility is the most acute and endangers the health and welfare of the largest number of human beings. Consequently, a combination of large population size, high population growth rate, and low gross national product is proposed as a main criterion for institutional development.

2. An equally important criterion is a strong institutional commitment and reasonable expectations that such a program will become self-sustaining in five to eight years. Without such a commitment from the institution and the

host government, efforts will produce an artificial program whose life will be limited to the donor agencies' willingness to support the costs and whose outputs might be relevant only to the donor agency. A minimum commitment from the institution includes provision of space and administrative support, integration of population courses in the regular curriculum, and a progressive transfer of grant-supported faculty to the institution's payroll. Assurances from the host government that the institution's output is needed and that the government will provide long-term financial support would be helpful.

3. In the selection of institutions, priority should be given to those that are likely to have the broadest influence on society. Such an impact can be measured either in terms of prestige in the academic world, access to the elite of the country, and credibility with the government or private sector, or in terms of the impact that their graduates can have on action programs at a particular time in the delivery of services. Such a priority system should not be restricted to university and traditional health schools but should assess the potential for impact of training institutions outside the health field in the areas of social work, community development, agriculture, political activities, and public administration.

4. Research and training in fertility regulation should be understood broadly and considered only as part of other applied health sciences. Subspecialization in this narrow field should be discouraged; on the contrary, dissemination of knowledge in fertility regulation should be encouraged among the related disciplines of gynecology, maternal and child health, public health, community health, clinical practice, paramedical practice, social work, and so on. Fertility regulation should be an interphase in which people trained in a variety of disciplines interact to bring their particular knowledge to bear on the population issue. In particular, the creation of artificially funded centers

with a very narrow demand for their product should be avoided. Instead, knowledge creation and dissemination are much more effectively located in existing departmental structures, whether they relate to public health, community medicine, gynecology, or other academic disciplines.

5. High priority should be given to institutions located in countries where governments are committed to action programs. But one should also recognize that the development of knowledge pertaining to the interrelationship between health and fertility can be an important means of helping other governments move toward action. An adequate reconciliation of this apparent duality of priorities can be provided by employing varying scales of financial support: large-scale institutional development projects to governments who are committed to action programs and small-scale projects to governments yet to be committed.

6. Priority should be given to institutions where past experiences demonstrate the willingness and feasibility of change and where at least a minimum capacity exists to guarantee a reasonable prospect of success. However, "high risk" institutions might be considered under particular conditions such as exceptional leadership and high potential benefits, as long as the risk is clearly recognized.

7. Excessive competition and unnecessary duplication within a country lead to the dispersion of resource personnel and an overall decrease in the quality of research and training. Adequate consideration should be given to existing institutions before new efforts are undertaken, and care needs to be exercised not to overload faculty and other local resources with competing projects.

8. The present inventory presents a picture of the surveyed institutions as of 1973-74. The picture will change over time, and a surveillance system will be needed if donor agencies are to be informed of new developments in these institutions and of the interest of new institutions. Countries should be visited periodically for this purpose. Progress reports on active projects

should be issued yearly and country surveys done on a triennial basis. Such a monitoring of institutional development potentials could lead to updating of this inventory, and possible gaps in institutional support might be exposed.

An order of magnitude for the various components of institutional development cannot be provided, as such efforts will vary from country to country with the tasks to be achieved, the population size, and the availability of local trained manpower and local resources. However, an average ranging from $20,000 to $100,000 per institution per year is a likely estimate, including staff training awards, consultants, seminars and conferences, international travel, faculty support, research funds and documentation.

Countries with large-scale national family planning programs will need training and research aimed at adequate planning, implementation, and evaluation of their efforts. Health institutions and, in particular, schools and departments of public health can most effectively assist by developing competence and research in health administration and modern management. Capacity for planning and evaluating large-scale delivery of services requires the development of a small but highly trained core of personnel. Contraceptive technology is usually taught, but access to international medical literature and, more importantly, the organization of seminars and conferences, which disseminate more up-to-date information, can speed the dissemination of knowledge. In general, training and research in demand creation (information and education of clients) have been neglected. The most important training and research field appears to be the training of paramedical personnel and community workers if services are really to be offered to the whole population. This type of institutional development may easily require $100,000 per country per year for at least five years.

In countries without large-scale action programs and where family planning efforts have only a health rationale, the first priorities should be the

development of adequate training and clinical research in modern contraceptive technology through all health training programs and the involvement of teaching institutions in modest sized programs of service delivery, such as postpartum family planning programs. Research in the relationships between health and fertility and projects for exposing teaching faculty to more advanced programs in other countries might be worth supporting.

Where there is no family planning activity, modest support (at a level of $20,000 per year) for research in the relationship between fertility and health and exposure to existing action programs in neighboring countries might be the most rewarding investment.

Assistance for institutional development should be seen along a continuum of various kinds and amounts of support. Institutional development can be achieved through something as simple as a modest staff development award for a promising professor, to support for population oriented research activities, to the support of a university department through a full-scale regional development program.

Population Council Role

The Population Council has limited resources, which represent a diminishing proportion of available resources in the population field. Nevertheless, the Council has the professional (and administrative) ability to channel funds from other donor agencies to meet, with flexibility, the needs of particular institutions.

In keeping with our traditional involvement in institutional development, such as with the Population Division of the Association of Colombian Medical Schools (ASCOFAME), the School of Public Health in Medellín, Colombia, Cayetano Heredia University in Peru, Yonsei University in Korea, and Teheran University in Iran, the Council will attempt in the 1970's to continue assisting

four or five health institutions in the developing world. In Latin America, beyond the continuation of our existing efforts in Colombia, the Council is interested in supporting university programs in Brazil or Mexico. The Council is also currently assessing the possibility of assisting schools of paramedical personnel to set up training and service capabilities in fertility regulation in countries such as Colombia, Bolivia, and Haiti. In East Asia, as the action programs develop in the outer islands, the Council might consider an institutional development program at Cebu University in the Philippines, or at Medang University in Indonesia. The Council follows with interest experiments in training paramedical personnel in Algeria and in the Sudan. In Sub-Saharan Africa, the Council will continue its support to the University of Ibadan in Nigeria and has undertaken to assist the University of Zambia in Lusaka in developing service, training, and research capabilities in fertility regulation.

Beyond these institutional development grant programs, the Council intends to maintain more general activities in the field. This will include the maintenance, both in New York and overseas, of a core staff of professionals who will be available to funding agencies and to institutions for assistance in preparing development plans, curriculum changes, recruitment and training of staff, and scientific research. Beyond this professional cooperation, the Council will attempt to raise funds and make grants available to the most promising institutions.

To assist in the two previously mentioned activities, the Council will provide administrative support to manage staff development awards and to supply library and other professional literature, including publications of the Council's Information Office.

The Council also intends to use existing channels of professional information and communication, such as professional societies and journals, to

disseminate information concerning the availability of support for institutional development. Furthermore, the Council will make its resources widely available to other agencies in order to increase coordination and to share information in the field of institutional development.

Chapter 7

HEALTH AND FERTILITY REGULATION

TEACHING AND RESEARCH POTENTIALS IN SUB-SAHARA AFRICA

The purpose of this chapter is to briefly define the scope of the institutional development inventory in Sub-Sahara Africa and to complement the country reports presented separately by presenting them within the regional health context and in light of the estimated demand for family planning knowledge in the area, and, whenever feasible, to attempt to describe the common characteristics of the institutions surveyed. Furthermore, this chapter summarizes the findings of the country surveys on university and non-university related training and research centers in Sub-Sahara Africa. Finally, it attempts to summarize the faculties' existing plans for training and research in family planning, to assess such plans within the local context and, particularly, to sketch the unique role that external funding or technical assistance agencies can play in meeting the needs and priorities of the African countries.

I. SCOPE OF THE SURVEY AND REGIONAL CHARACTERISTICS

Before attempting to summarize the training and research efforts undertaken by Sub-Sahara African institutions as described in the country reports, it seems important to describe briefly the limitations of the survey and to summarize the common characteristics found in the health situation, in the demand for family planning knowledge, and among the institutions surveyed in Sub-Sahara Africa.

A. Scope of the Survey

Basically this report will cover Western Africa (population: 110 million), Eastern Africa (106 million) and Middle Africa (38 million).[1] Northern Africa (95 million), which shares so many characteristics with the Middle Eastern countries, is included for our purpose in the Near East and North Africa Report. The non-sovereign countries and the Southern African area (with a population of 25 million, of which the Republic of South Africa represents 22 million), were excluded from this survey. Even within the three regions surveyed, we did not attempt to include every country, but rather to sample the most important countries in terms of their population size, higher learning institutions, and their role in the francophone or anglophone world. Specifically, the appended country reports cover Cameroon, Ethiopia, Ghana, Ivory Coast, Kenya, Liberia, Nigeria, Senegal, Sierra Leone, Tanzania, Zaire, and Zambia.

B. Demand for Family Planning Knowledge

The level of demand for family planning services and manpower can be discussed from either a demographic or health point of view.

Table I shows 1973 population estimates, the crude birth and death rates, the rate of population growth, the percentages of urban and literate population, and the per capita gross national product for Sub-Sahara Africa. The countries of Western, Eastern, and Middle Africa are generally characterized by a very high birth rate in the 45-50 range, with a few exceptions such as Gabon (crude birth rate of 33) and Equatorial Guinea (CBR 35) which have a naturally low fertility, and Mauritius which has a well developed family planning

---

1. 1973 World Population Data Sheet - Population Reference Bureau, Inc., Washington, D.C. (We followed P.R.B.'s delineation of subregions in Africa.)

program. However, Africa is also characterized by a high death rate, generally in the range of 22 to 25 per thousand. This combination of very high birth rate and high death rate produces a rather high rate of population growth of around 2.5 percent in Western and Eastern Africa and of 2.1 percent in Middle Africa with a great potential for growth in the future as the death rate will certainly decrease. A more in-depth discussion of the demographic situation in Africa can be found in the "Report on Institutional Development in Demography and Related Social Sciences, Africa" under "The Demographic Context." More important perhaps is the perception of the demographic situation in Africa as reflected by the governments' attitudes toward population growth. As seen in Table II, only four countries have an official policy to reduce the population growth rate: Kenya (12 million), Ghana (9.9), Mauritius (0.9), and Botswana (0.7). Excluding Southern Africa, nine additional countries support family planning activities for other than demographic reasons. By decreasing order of population size, these countries are Nigeria, Zaire, Tanzania, Uganda, Rhodesia, Mali, Dahomey, Liberia, and Gambia. In francophone Africa the level of demand for family planning services is limited by the fact that most of the governments of these nations have kept the anti-contraception laws inherited from the French colonization ("law of 1920"), and some countries such as Chad, Gabon, and Cameroon have adopted new anti-contraception laws.[2]

Popular demand for family planning services does not appear to be very high either: KAP surveys reveal ideal family sizes, which are much

---

2. Bernard Wolf, "Anti-Contraception Laws in Sub-Saharan Francophone Africa: Sources and Ramifications." Law and Population Monograph Series, No. 15, 1973. The Fletcher School of Law and Diplomacy.

higher than in other parts of the world, usually exceeding six children.[3] Rural populations, which represent most of the population of Sub-Saharan Africa, and large segments of the urban population rely primarily on prolonged lactation and sexual taboos, which prohibit intercourse for prolonged periods after delivery, as their main family planning methods. Nevertheless, such traditional attitudes toward family planning seem to be changing among certain segments of the population in the large cities where social changes appear to alter the high fertility norms.

If the demand for family planning knowledge for demographic reasons appears low in Africa, it seems to be increasing for health reasons. Not only are the crude death rates in Africa among the highest in the world, but, as will be discussed below, infant and maternal mortality rates are also very high. The potential of family planning services to decrease maternal and infant mortality and to better the quality of life is being increasingly recognized by health teachers and administrators.[4] The increasing number of abortions among young unmarried women in urban areas indicates an increasing demand for sex education and fertility regulation and becomes a well publicized medical problem.[5]

---

3. Caldwell, "The Control of Family Size in Tropical Africa," Demography 5:598, 1968; and "Fertility Control" in Population Growth and Socio-economic Change in West Africa, Columbia University Press, in press.

4. O.A. Ojo, "Introduction of the Commissioner for Health, Western State of Nigeria" in O.A. Ojo, editor of Proceedings of the first seminar on family planning in West Africa. University College Hospital, Ibadan, Nigeria 1972; and Son Excellence Le Citoyen Commissaire d'Etat Charge de la Santé Publique, "Discours d'ouverture du seminaire" in Sabwa a Matanda and Pauls F. ed. Naissances desirables basées sur la Maternité, Kinshasa, Zaire, 1974.

5. Pierre Pradervand "Le Probleme en Afrique Tropicale" in IDRC Education Sexuelle en Afrique Tropicale, Ottawa 1973, page 10.

In summary it seems apparent that knowledge needed for implementation of large scale family planning programs -- planning, implementation and evaluation, contraceptive technology, and mass communication -- is in demand only in Kenya and Ghana and accessorily in Mauritius and Botswana. In the nine countries supporting family planning for other than demographic reasons, knowledge is mostly needed on contraceptive technology, clinic organization, family planning information, and education. However, some of these countries (Nigeria, Mali, Tanzania, Zaire) are attempting to enlarge their family planning activities and may require knowledge in program planning and implementation and evaluation in the near future. In countries which do not support family planning activities and where contraception is not illegal, the demand for knowledge is presently limited to the teaching of contraceptive technology in medical schools, but should expand to other health and social work schools to permit the implementation of the World Population Plan of Action recently signed in Bucarest.[6]

C. Health Background

The potential for developing family planning knowledge cannot be adequately assessed unless the requirements for health manpower development, stemming from the special health situation in Africa, are taken into consideration.

Life expectancy at birth in Africa is much shorter than in other parts of the world, averaging about 45 years and usually less in Western and Middle Africa (Table III). As this table also indicates, all the African countries, except the Malagasy Republic and the two exceptional islands of Mauritius and Réunion, have an infant mortality rate of 120 or more per thousand live births.

---

6. United Nations: "World Population Plan of Action," paragraphs 29 and 87. Bucarest, 1974.

More than half of the countries have an infant mortality rate in excess of 150 -- a situation that is rarely found in Asia and Latin America. Maternal mortality is also excessive often being in the range of fifty per 10,000 live births in rural areas.

The reasons for such a grim health picture are many. The tandem malnutrition-infectious disease is certainly the most important factor in infant mortality.[7] Childhood diseases, which would have only a limited impact on a well fed population, have a catastrophic one on the malnourished populations of Sub-Saharan Africa. The prevalence of communicable disease remains high in Africa, including parasitic diseases such as malaria, bilharziasis, filariasis, trypanosomiasis, helminthiasis, and others. The prevalence of some of the parasitic diseases compounds the nutrition problem by often preventing an adequate use of good agricultural land: Wide areas of Africa that could be good grazing land become useless because of the trypanosome carried by the tsetse fly. Hence, the drier areas just south of the Sahara which are less suitable for cattle raising are becoming overused following the catastrophic drought in the Sahel.

Most countries of Sub-Saharan Africa rank among the lowest in the world in gross national product per capita (Table I) which makes the allocation of their resources particularly difficult. With the exception of Senegal, ministries of health receive only a small part of national allocations to develop and maintain health services. Compounding this situation of scarce resources and high mortality and morbidity, the ministries must reckon with

---

7. Alan Berg, "The Malnutrition Problem," in The Nutrition Factor, The Brookings Institute, Washington, 1973. Also see H.L. Vis and P. Hennart, "L'allaitement Maternel en Afrique Centrale" in Assignment Children, no. 25, United Nations Children's Fund, March 1974.

an acute shortage of medical and paramedical health personnel, the quasi-absence of trained health administrators, and medical curricula that are more tailored to the needs of the developed societies of Western Europe than to the needs of the local populations. Table III shows the population per physician ratio in each African country. Excluding the special case of the islands of Mauritius and Réunion and the minority ruled countries, only four have less than 10,000 population per physician (Gabon, Kenya, People's Republic of Congo, and Uganda). At the other extreme, six countries have a ratio of more than 50,000 population per physician (Niger, Upper Volta, Burundi, Ethiopia, Rwanda, and Chad). The absolute lack of physicians is further aggravated by an acute geographical maldistribution related to the tendency of physicians to concentrate their practices in the major cities of each country. Over the past twenty years, from 1950-70, the number of physicians per 10,000 population has increased from 0.91 to 1.36, or a rate of increase slightly higher than 2 percent per year.[8] In view of the present acute shortage of doctors and the demographic growth in Africa, it appears reasonable to assume that the present ratio of physicians to population will keep increasing at the accelerating rate of growth experienced during the past twenty years. Under this assumption the number of physicians would increase from 47,200 in 1970 to 300,200 in the year 2000.[8] Such a ratio would represent only about one-third of the ratio enjoyed by Europe in 1958[8] and will require huge investments in training and infrastructure. Delays in the completion of an adequate infrastructure would likely encourage out-migration of physicians as is now occuring in other parts of the

---

8. Reference: Bui-Dnag-Ha Doan. "World Trends in Medical Manpower 1950-1970," World Health Statistics Report, Vol. no. 27, no. II, 1974, World Health Organization, Geneva.

world. The situation is no better, and often worse, in terms of paramedical personnel -- especially in terms of female nurses and midwives.[9] Concentrated efforts to develop auxiliary health personnel offer better prospects on a short term basis, but important problems of educational requirements, training methods, and supervision remain to be solved.[10]

This situation has generally been recognized by African governments. Consequently, they have set priorities which appear to be: (1) training of health manpower, (2) control of communicable disease, (3) environmental health measures, and (4) expansion of basic health services. Such policies seem to be an adequate response to a situation of scarce resources and excessive pathology. Any plan to develop knowledge in family planning through training and research will have to take into consideration existing priorities in health if it is to be supported by national governments. This emphasizes the high priority need for research in the interrelationship between health and fertility in Africa. However, the limitations of the health system could also constitute an excellent argument to use other channels to provide family planning information and services to large populations.

D. Institutional Characteristics

It is always dangerous to attempt to generalize about institutions located in countries so varied as Mali and the Malagasy Republic, or Ethiopia and Zaire. Nevertheless, it seems to us that some common characteristics exist among Sub-Saharan African institutions.

---

9. John Bryant, "The problems countries face" in Health and the Developing World. Cornell University Press. 1969.

10. N.R.E. Fendall, "Auxiliary is Health Care: Programs in Developing Countries," The Johns Hopkins Press, 1972.

African institutions can draw from only very limited resources because of the low gross national product of their countries, and even more because of their small national populations. In fact, among the thirty-five sovereign countries in the region surveyed, five have a population of less than one million, twenty-five have a population of less than ten million, and only five have a population of ten million or more. Consequently, many small countries have insufficient resources to adequately support institutions of higher learning in the health field.

Most of the medical schools in the area were only recently established and have graduated their first class in the last ten years. The universities of Dakar, Ibadan, and Makerere (formerly, University of East Africa) are an exception to this generalization. As a consequence of their recent establishment many of the African universities lack traditions in research, have inexperienced or transient faculties, and still must evaluate how their products meet the national needs.

Many African institutions have been affiliated with European universities and have usually followed the model of the mother institution. Such a model too often appears to be poorly adapted to the African situation, and the educational objectives are frequently remote from the health needs of the local population. The fact that postgraduate training often takes place in European or American universities increases the drive toward specialization or even super-specialization whose relevance in the African context is debatable.

With certain exceptions, such as in Ghana and Nigeria, the universities have little liaison with the national health delivery system. This is due to universities relating to ministries other than the health service, to personnel problems, and to emphasis on disease rather than on health. Such a

lack of coordination often results in the training of health manpower poorly prepared to fulfill the health priorities of the government.

Because of government pressure to produce large numbers of medical graduates to meet the needs of the country, universities put great emphasis on training at the expense of research. The lack of applied research reinforces the isolation of the faculty from real life and weakens the relevance of the training programs. While the basic resources needed for fundamental research are not available in Africa, much more could be done in applied research which could have important bearing on the training.

In spite of generally free medical education, physicians have few responsibilities to fulfill upon graduation. In view of the limited opportunities available outside of private practice, which is quite limited, it should be anticipated that an important out-migration of physicians will occur in future years.

Only a few innovative institutions, such as the East African universities and the Centre Universitaire des Sciences de la Santé, Cameroon, have realized the need to train locally national health teachers and health personnel for a team approach, and to recognize the importance of the use of medical auxiliaries if health services are to be delivered on a broad scale in future years.

In general there is an urgent need for better integration of demographic, social, and statistical knowledge in medical school curricula with proper priorities given to the type of personnel that can be realistically trained and employed by the country in the near future -- including paramedical personnel and in particular auxiliary health workers.

In view of the lack of a family planning training program in franco-

phone Africa and the lack of structured clinical and programmatic activities on which to base such a training program, it has been necessary to train professionals in family planning outside of Africa. The National School of Public Health at Rennes, France, constitutes the best alternative, in our opinion, for the next two to three years until such a program can be established in francophone Africa.

II. SUMMARY OF POTENTIAL FOR INSTITUTIONAL DEVELOPMENT

From a substantive aspect we have reviewed the health institution's potential for training and research in the following areas:

1. Assessment of needs and demand for family planning services, including the teaching of medical sociology and demography, often presented as population epidemiology;

2. Fertility regulation technology;

3. Planning, implementation and evaluation of family planning programs, including training of paramedical personnel for large scale delivery of services; and

4. Mass communication and family planning education.

Clearly the demand for knowledge in these areas will vary according to the government's attitude toward family planning in general and population growth in particular. Consequently, we have reviewed the institutions in relation to the government's population policy.

A. Countries With an Official Policy to Reduce the Population Growth Rate

KENYA

The University of Nairobi: The medical school was established in 1967 within the University of East Africa and became independent of this

institution in 1970. This relatively young institution graduated the first sixteen physicians in 1972 and hopes to graduate ninety physicians by 1978. The first eight nurse-teachers graduated in 1970. The school still must rely heavily on foreign faculty. Adequate training in contraceptive technology and some aspects of program implementation are taught through the Department of Community Medicine and through a twelve week course integrated with the Departments of Obstetrics-Gynecology and Pediatrics and Child Health. Nevertheless it seems unlikely that the small number of professionals graduating presently can have more than a limited impact on the government program. However, the school of medicine could certainly benefit from assistance in applied research on the barriers limiting family planning implementation in Kenya. The Department of Community Medicine appears to have potential for such research, and the integration of what would be learned from such research could have great relevance for the teaching programs.

In order to meet the challenge of training personnel needed by the existing plan of action in family planning, an adequate participation of the Medical School in the Population Studies and Research Center of the University of Nairobi is needed. It seems that only from the interaction of such an association could a proper assessment of need and demand for services be achieved and manpower trained to plan, implement, and evaluate the national effort.

In order to implement on a large scale the five-year population program proposed for 1975-79, adequate consideration should be given to the Ministry of Health training institutions. In particular, the Medical Training Center in Nairobi, which trains 130 medical assistants yearly, and the future medical training center, which is to be established in the near future at

Nakuru with the capacity for 300 students, can play an important role in the training of middle level providers of family planning services. Among the three nursing schools training registered nurses (170 graduates per year) and the nine training schools graduating practical or community nurses (300 per year), one school should be encouraged to develop a pilot research program on the use of paramedical personnel to provide family health services including family planning. Schools of social workers could play a meaningful part in the program.

GHANA

The Ghana Medical School graduated its first class of thirty-nine physicians in 1969. It is presently graduating fifty-five physicians a year. Two departments are concerned with family planning research and training: the Department of Obstetrics and Gynecology and the Department of Community Health. The Department of Obstetrics and Gynecology has acquired considerable experience with family planning activities over the past few years and has provided ad hoc training programs for the Ghana National Family Planning Program (GNFPP). The department has proposed the establishment of a National Family Planning Center which would serve as a major research, training, and service facility for the country. The creation of such a center would imply good coordination with the GNFPP. This has been difficult in the recent past because of personality problems. Such a center could certainly develop knowledge in program implementation and evaluation as well as in contraceptive technology. Whether such a program could adequately assess the need and demand for services, evaluate large scale programs, and provide adequate training in mass communication and family planning information depends upon input from the Institute for Social, Statistical, and Economic Research at Legon. Additional contributions to a national

training center could be made by the Department of Community Health which has had experience in demographic and health surveys and in the delivery of health and family planning services in rural areas (Danfa Project).

B. Countries Supporting Family Planning Activities for Other Than Demographic Reasons

NIGERIA

The University of Ibadan Faculty of Medicine has acquired considerable experience through the activities of the Departments of Obstetrics and Gynecology, Chemical Pathology, Medicine, and Preventive and Social Medicine. Besides acquiring family planning services experience in the main hospital facility, the medical school has been involved in delivering family planning services in rural areas through interdisciplinary projects. The Department of Obstetrics and Gynecology has demonstrated its ability in doing clinical research on the newer methods of fertility regulation and in providing adequate training not only to its own staff but also to large numbers of nurses from the Western State and other neighboring states. The possibility of creating an Institute of Health that would include, among others, a unit of statistics, epidemiology, mother and child health, and health education, seems to be a logical extension of the activities of the Department of Preventive and Social Medicine. Such an institute could provide Nigeria with a training center with easy access to experimental areas and could be an ideal training institution for program planners, administrators, and evaluators.

The Faculty of Health Sciences, University of Ife, is an interesting departure from traditional medical school organization and curriculum. The faculty's educational objective to train a health team composed of graduate medical and paramedical personnel to work in rural and urban areas is a significant innovation. The Division of Community and Nursing Care in rural areas and

the Division of Hospital Care in urban areas will be playing an important role in the development of new knowledge and in training for their respective communities. The emphasis in the Department of Community and Nursing Care appears to be on the delivery of family planning within the MCH context and on the training of paramedical personnel as a primary care provider including family planning.

The College of Medicine, University of Lagos, is involved in family planning research and training through the Departments of Community Health, Pediatrics, and Obstetrics and Gynecology. The Department of Community Health was historically the first department to provide family planning, research, and training in Nigeria. The department is active in the training of paramedical personnel and in research in contraceptive technology. Its family health clinic has the potential of becoming a major training center for Nigeria. Under the leadership of Dr. O. Ransome-Kuti, the Department of Pediatrics has played a major role in the organization of maternal and child health services in Nigeria. The department offers great potential for programmatic research in MCH and family planning delivery systems. Some interest in clinical research in contraception exists in the Department of Obstetrics and Gynecology.

The Faculty of Medicine, University of Benin, is an institution recently established in the Mid-Western state. The institution seems to have adopted the concept of training health teams. Interest exists for family planning activities in the Departments of Obstetrics and Gynecology, Community Health, and Pediatrics, but additional staff and resources for research and training are needed.

The Faculty of Medicine, University of Nigeria, Enugu, has shown interest for family planning services as a teaching base and accessorily as a potential for research. The Department of Obstetrics and Gynecology and the

Department of Pediatrics seem to emphasize the concept of linking family services to postnatal well-baby care. Both departments would appear to want to use their service facilities as a training ground for physicians and nurses. Interest and assistance from the Department of Preventive and Community Medicine could be expected.

ZAIRE

Université Nationale du Zaire (UNAZA) is a recent institution whose educational objective must still stand the test of time. The Department of Obstetrics and Gynecology is now in a state of transition. Potential for research and training will have to wait for the designation of a new head. Similarly, the Department of Public Health has an almost nominal existence because of the inability of the university to recruit a fulltime chairman.

The Institute of Paramedical Training operated by the UNAZA constitutes an important institution because of its role in the training of paramedical trainers. Present plans supported by the Rockefeller Foundation and WHO to use the institute as a training ground for future teachers of other paramedical schools in Zaire gives the institute special significance.

TANZANIA

The Faculty of Medicine, University of Dar Es Salaam, was established in 1968 and presently enrolls forty-five to fifty students a year. The faculty is divided into three divisions: Bio-Medical Sciences, Clinical Practice, and Social and Community Medicine. The Division of Social and Community Medicine teaches demography and family planning, including contraceptive technology and some aspects of the psychology of contraceptive use. Family planning is also included in the health education course. The Division of Community Medicine plans to offer a postgraduate program in public health which would increase the need for a teaching staff in family planning and for data processing equipment.

In view of the government's commitment to deliver health services to the rural population, the five Medical Assistant Training Centers and the School of Rural Medical Aides should be surveyed to assess the feasibility of creating a pilot program of family planning services delivery based on paramedical personnel.

LIBERIA

The School of Medicine, University of Liberia, graduated its first four physicians in 1973. It appears to be in a precarious state and its plan for training and research in family planning must still be developed.

The Tubman National Institute is a training school for nurses, sanitarians, and medical assistants. It presently has no formal training in family planning, but there are plans to introduce family planning in the curriculum of the School of Nursing.

Cuttington College has a School of Nursing with a good course in health education and some family planning training.

MALI

While circumstances made it impossible to obtain a country report on Mali, l'Ecole de Medecine in Bamako should be surveyed because of the positive attitude of the government of Mali toward family planning activities. The Malian Association for the Protection and Promotion of the Family (part of the Ministry of Social Affairs), has demonstrated innovative approaches and could become a source of knowledge for the delivery of services in a setting appropriate to African values..

C. Countries Not Supporting Family Planning Activities

CAMEROON

The Centre Universitaire des Sciences de la Santé (CUSS) of the University of Cameroon was founded in 1969 for the training of physicians and health personnel. Its first class will graduate in 1975. The public health unit under the leadership of Dr. Lantum has shown interest in the teaching of demography and population problems including an abortion study that began in 1971 and a health and demographic survey. Family planning services, on request, and teaching to medical students and paramedical personnel are provided by the Department of Obstetrics and Gynecology. CUSS should be watched with great interest over the next few years as it represents the most innovative experiment in health training in francophone Africa. Potential for training and research in population are still to be ascertained.

ETHIOPIA

The Faculty of Medicine at Haile-Selassie I University was established in 1966. It has demonstrated interest in population activities only through its Department of Preventive Medicine and Public Health. The department's interest has been to survey the rural communities and to establish baseline data on the demographic, social, nutritional, and epidemiological status of the population.

The Public Health College at Gondar, established in 1954, constituted one of the first innovations intended to provide health services in Africa through specially trained paramedical personnel used as a team. Nevertheless, administrative changes and reorientation of objectives have created much uncertainty for the faculty and the trainees of the college.

IVORY COAST

The Faculty of Medicine, University of Abidjan, graduates around forty students a year. Interest in family planning activities exists only in

the Department of Obstetrics and Gynecology at the Hospital of Treichville. Some teaching of contraceptive technology is offered to medical students as well as to students of the National School of Nursing and the National School of Midwifery. Dr. Sangaret is interested in a medico-social study of the Ivorian child and in the complications associated with pregnancy in the Ivory Coast.

The National Institute of Public Health could represent an ideal institution in francophone Africa to develop the concept of public health and to train health workers as a team. The institute provides training in sociology, social and economic planning, and public and social development, but has so far demonstrated little interest in family planning activities.

SENEGAL

The Medical School of the University of Dakar is the oldest medical school in francophone Africa and graduates 200 students a year. While some young faculty members have an interest in family planning research and services, there have so far been no services, research, or training activities worth mentioning.

SIERRA LEONE

The only health institution in Sierra Leone is the National School of Nursing. Family planning is taught as part of the public health and maternal health specialties.

ZAMBIA

The University of Zambia at Lusaka appears to be a very innovative institution in southeast Africa. A request for support of family planning services in the Department of Obstetrics and Gynecology and in all Maternal and Child Health centers in Lusaka has been approved by the Population Council as part of a training program for physicians and paramedical personnel. Interest also exists in pregnancy termination services and research in the most modern methods

of fertility regulation.

III. GOALS AND RECOMMENDATIONS

A. The Goals

The goal of Institutional Development in health/family planning is to assist selected institutions in the development of adequate manpower to produce local knowledge in the field of family planning, to disseminate such knowledge through the training of health and other students, and, ultimately, to bring such knowledge to bear on the distribution of services to the population. Institutional Development goes beyond assistance to research, which helps to create new knowledge but does not create the self sustaining capacity to generate knowledge locally. It also goes beyond manpower development because it anchors the capacity to generate knowledge in a local institution. Such an institution is better attuned to local circumstances and is also recognized as the primary source of knowledge. Consequently, it focuses on universities and other health institutions that have training and research as their raison d'être. The ultimate objective of Institutional Development in family planning in Africa is to create self-sustaining centers generating knowledge in the four substantive areas described previously. In particular, the aim should be to provide governments that already have a population policy aiming at the reduction of the population growth rate, with institutions able to provide the required knowledge and trained manpower, to plan, implement, and evaluate family planning programs, and to train health and other personnel for large scale delivery of services. Where countries support family planning for reasons other than demographic growth, Institutional Development's goal should be to assess the need and demand for family planning services and to disseminate

fertility regulation technology and family planning education.

We see the proper role of external agencies as being, first, to identify institutions with the potential to sustain a core of teachers and researchers with relevant interests in family planning activities. Subsequently, external agencies should assist such institutions through financial, technical, and, when needed, professional assistance to develop and implement training and research programs. The tools for assistance can include short or long term provision of professionals, staff development fellowships, financial support, and facilitation of access to relevant knowledge through libraries, seminars, and consultation.

B. Recommendations

Ideally, one could recommend the development of three population centers based in East Africa, West Africa, and Francophone Africa, whose responsibilities would be to assess the needs and demands for services and to generate the knowledge necessary to plan, implement, and evaluate programs in their areas. In such a strategy, the creation of knowledge in contraceptive technology and in information and education, as well as the training of paramedical personnel, would be developed on an ad hoc basis in interested national institutions. Such an approach would ignore previous unfortunate experience with national boundaries and differences, varying degrees of institutional excellence, and would tend to have a limited feasibility because of existing institutional priorities. Consequently, we prefer to base our recommendations on existing interests among Sub-Sahara African institutions, judged in the context of the requirements of the countries, their feasibility, and the government policy toward family planning.

1. First Priority Countries

NIGERIA

The development of a program to assess the demand for family planning services, and to plan, implement, and evaluace large scale programs, should be supported either at the University of Ibadan or the University of Lagos. At the University of Ibadan the accumulation of knowledge in bio-medicine, contraceptive technology, social sciences, and public health experience, including delivery of family planning services to rural populations, make this institution a prime candidate. Similarly, the University of Lagos offers the strength of the Department of Community Health and the long experience of its new chairman, Dr. Ransome-Kuti in MCH family planning services.

The development of training and research centers in fertility regulation technology should be supported both in the Department of Obstetrics and Gynecology at the University of Ibadan and at the University of Lagos under the leadership of Dr. Muriel Oyediran.

Manpower development fellowships and professional consultation up to two years duration should be provided to the Departments of Community Health at the University of Benin, University of Nigeria (Enugu), University of Lagos, and possibly the University of Ife.

Depending upon the ability of the University of Benin and the University of Nigeria (Enugu) to develop family planning services in the teaching hospital, provision of support for research could be undertaken in the future.

KENYA

The Medical School and, in particular, the Department of Community Medicine should be encouraged to participate in the activities of the Population Studies and Research Center. From such an association could result a program with the capacity for planning, training, and evaluating family planning programs.

Support should be provided to the Department of Obstetrics and Gynecology and the Department of Community Medicine for their research and training activities in fertility regulation and their programmatic research.

The Medical Training Centers at Nairobi and Nakuru should be surveyed to assess their potential needs in manpower development awards and library materials.

Similarly, the three nursing schools for registered nurses and the nine other nursing schools of the Ministry of Health, as well as the schools for social workers, should be visited in order to assess interest in establishing a pilot program for training of paramedical personnel to deliver family planning services.

TANZANIA

Assistance should be provided to the Division of Social and Community Medicine of the University of Dar Es Salaam, particularly for its postgraduate training program in public health. Such assistance should include postdoctoral fellowship awards and equipment for statistical analysis.

ZAIRE

Assistance should be provided to the Université Nationale du Zaire to recruit a full-time chairman for the Department of Public Health. Increased coordination between this department and the Institute of Paramedical Training of the university, the Department of Obstetrics and Gynecology, and FOMECO's activities at Mama Yemo Hospital should be encouraged in order to provide a proper institutional base to plan, implement, and evaluate family planning activities.

UNAZA could certainly benefit from staff development awards in public health and in the social aspects of gynecology and obstetrics (M.P.H.). The

National School of Public Health at Rennes could be of great assistance in this area, as it appears to be the only francophone institution at the present time with the interest, prestige, and staff to offer broadly conceived training in family planning.

2. Second Priority Countries

GHANA

Support should be provided to the University of Ghana Medical School to develop a national family planning center with the participation of the Department of Obstetrics and Gynecology and the Department of Community Health with some input from the Ghana National Family Planning Program. From the collaboration of such a center and the Institute for Social, Statistical, and Economic Research, adequate knowledge could be developed to meet the needs of the national program.

Assistance should be provided to the family planning activities of the Department of Obstetrics and Gynecology to maintain its high quality family planning services and to increase research in contraceptive technology.

Assistance should also be provided to the Department of Community Health, including provision of teachers in epidemiology, and MCH and family planning, and provision of staff development fellowships.

MALI

Increased involvement of l'Ecole de Médecine in the family planning program developed by the Ministry of Social Affairs should be encouraged. By assuming some responsibility in the Malian Family Planning Program, l'Ecole de Médecine could become a primary training center for medical and paramedical personnel in francophone Africa.

3. Third Priority Countries

ZAMBIA

Assistance for research in fertility regulation technology should be provided to the University of Zambia at Lusaka. The present involvement of the Department of Obstetrics and Gynecology in community health on a moderately large scale, should encourage donor agencies to provide staff development awards such as M.P.H. training to young faculty members.

Further exploration of needs for library and equipment assistance should be undertaken.

CAMEROON

Support for research in the assessment of needs and demands for family planning services should be encouraged at CUSS, including research on the inter-relationships between health and family planning in West Africa. Provision of a library and journals related to the population field should be considered. In the future (after 1975), the need for staff development awards should be assessed.

IVORY COAST

Support for research in fertility regulation techniques should be offered to Dr. Sangaret and the Department of Obstetrics and Gynecology at the University of Abidjan. Potential for training paramedical personnel in fertility and family planning techniques should be reassessed in the near future in light of the nomination of a new Director of Studies at the Institute of Public Health.

Provision of knowledge in the form of libraries and journals should be offered to the Institute of Public Health and to the medical school.

ETHIOPIA

Assistance should be offered to the Department of Preventive Medicine and Public Health at Haile Selassie I University for study of the need and demand for family planning services in Ethiopia.

4. Fourth Priority Countries

There is little prospect for Institutional Development in family planning at the University of Liberia, the University of Dakar, or in Sierra Leone. Nevertheless, fellowship support on an ad hoc basis should be considered, dissemination of library materials on population should be encouraged, and short term consultancy and sympathetic consideration of research proposals should be offered.

Special consideration should be given to providing information materials and possibly audiovisual equipment to the nursing school at Cuttington College in Liberia, at the National School of Nursing in Sierra Leone, and at the Public Health College at Gondar, Ethiopia.

Table I

AFRICA: BASIC DEMOGRAPHIC AND ECONOMIC DATA[1]

	Population Estimates Mid-1973 (millions)	Crude Birth Rate	Crude Death Rate	Rate of Population Growth (percent)	Percent Urban[2]	Percent Literate[2]	Per Capita GNP ($US)
AFRICA	374	46	21	2.5	--	--	--
NORTHERN AFRICA	95	44	17	2.7	--	--	--
WESTERN AFRICA	110	49	24	2.5	--	--	--
Cape Verde Islands	0.3	39	14	2.5	8.0	39.3	160
Dahomey	2.9	51	26	2.6	13.3	--	90
Gambia	0.4	42	23	1.9	10.0	--	120
Ghana	9.9	47	18	2.9	31.2	--	310
Guinea	4.2	47	25	2.3	11.2	--	120
Guinea-Bissau	0.6	41	30	1.1	--	--	250
Ivory Coast	4.6	46	23	2.4	21.3	--	310
Liberia	1.2	50	23	2.7	10.1	13.9	240
Mali	5.5	50	27	2.3	12.9	4.0	70
Mauritania	1.3	44	23	2.1	7.4	--	140
Niger	4.2	52	23	2.9	8.2	1.5	90
Nigeria	59.6	50	25	2.6	22.8	--	120
Senegal	4.2	46	22	2.4	26.0	10.4	230
Sierra Leone	2.8	45	22	2.3	13.9	9.6	190
Togo	2.0	51	26	2.5	13.3		140
Upper Volta	5.7	49	29	2.0	3.7	--	60
EASTERN AFRICA	106	47	22	2.5	--	--	--
Burundi	3.9	48	25	2.3	2.6	--	60
Ethiopia	26.8	46	25	2.1	8.7	--	80
Kenya	12.0	48	18	3.0	10.2	--	150
Malagasy Republic	7.5	46	25	2.1	--	--	130

(1) 1973 World Population Data Sheet, Population Reference Bureau, Inc.
(2) Population and Vital Statistics Report, Series A, Vol. 26, No. 1 (January 1974), p. 30ff, 38ff.

Table I (Continued)

AFRICA: BASIC DEMOGRAPHIC AND ECONOMIC DATA[1]

	Population Estimates Mid-1973 (millions)	Crude Birth Rate	Crude Death Rate	Rate of Population Growth (percent)	Percent Urban[2]	Percent Literate[2]	Per Capita GNP ($US)
EASTERN AFRICA (Con't)							
Malawi	4.8	49	25	2.5	5.9	33.7	80
Mauritius	0.9	25	8	1.7	41.7	71.5	240
Mozambique	8.2	43	23	2.1	5.7	--	240
Reunion	0.5	30	8	2.2	27.3	59.9	800
Rhodesia	5.6	48	14	3.4	19.8	--	280
Rwanda	3.9	52	23	2.9	0.3	--	60
Somalia	3.0	46	24	2.2	20.2	--	70
Tanzania	14.3	47	22	2.6	6.3	42.7	100
Uganda	9.3	43	18	2.6	9.5	36.8	130
Zambia	4.7	50	21	2.9	23.6	61.0	400
MIDDLE AFRICA	38	44	24	2.1	--	--	--
Angola	6.1	50	30	2.1	14.3	4.3	300
Cameroon	6.2	43	23	2.0	20.5	--	180
Central African Republic	1.6	46	25	2.1	25.4	--	140
Chad	4.0	48	25	2.3	6.9	12.1	80
Congo (People's Republic of)	1.0	44	23	2.1	29.7	--	300
Equatorial Guinea	0.3	35	22	1.4	30.0	--	210
Gabon	0.5	33	25	0.8	19.2	22.2	630
Zaire	18.7	44	23	2.1	16.2	39.2	90
SOUTHERN AFRICA	25	41	18	2.4	--	--	--
Botswana	0.7	44	23	2.2	4.1	--	110
Lesotho	1.1	39	21	1.8	--	44.0	90
South Africa	21.7	41	17	2.4	50.5	--	(760
Namibia (Southwest Africa)	0.7	44	25	2.0	31.8	45.2	(
Swaziland	0.5	52	24	2.8	4.6	--	180

Table II

POPULATION POLICY OF

GOVERNMENTS IN SUB-SAHARA AFRICA, 1973[1]

Official Policy to Reduce the Population Growth Rate	Official Support of Family Planning Activities for Other Than Demographic Reasons	Residual Category
	WESTERN AFRICA	
1. Ghana	1. Dahomey	1. Guinea
	2. Gambia	2. Guinea-Bissau
	3. Liberia	3. Ivory Coast
	4. Mali	4. Mauritania
	5. Nigeria	5. Niger
		6. Senegal
		7. Sierra Leone
		8. Togo
		9. Upper Volta
	EASTERN AFRICA	
2. Kenya	6. Rhodesia	10. Burundi
3. Mauritius	7. Tanzania	11. Ethiopia
	8. Uganda	12. Malagasy Republic
		13. Malawi
		14. Mozambique
		15. Rwanda
		16. Somalia
		17. Zambia
	MIDDLE AFRICA	
	9. Zaire	18. Angola
		19. Cameroon
		20. Central Africal Republic
		21. Chad
		22. Congo
		23. Equatorial Guinea
		24. Gabon
	SOUTHERN AFRICA	
4. Botswana	10. Namibia	25. Lesotho
	11. Swaziland	

(1) Sources: Dorothy Nortman, "Population and Family Planning Programs: A Factbook," Reports on Population/Family Planning, Table 6, forthcoming 1974.
B. Maxwell Stamper, "Population Policy in Development Planning: A Study of Seventy Less Developed Countries," Reports on Population/Family Planning, No. 13, May 1973.
USAID, Population Program Assistance, FY1973, p. 131-160.

Table III

AFRICA: SELECTED HEALTH INDICATORS[1]

	Life Expectancy at Birth	Infant Mortality	Population Per Physician[2]	Daily Per Capita Caloric Intake[3]
WESTERN AFRICA				
Cape Verde Islands	--	121	--	--
Dahomey	39	149	32,028	2,170
Gambia	41	125	18,947	2,320
Ghana	46	156	12,392	2,070
Guinea	--	216	49,140	2,060
Guinea-Bissau	34	--	17,667	--
Ivory Coast	41	159	13,859	2,430
Liberia	--	137	1 ,455	2,290
Mali	37	190	41,452	2,130
Mauritania	41	187	17,206	1,990
Niger	41	200	56,667	2,170
Nigeria	37	--	20,526	2,290
Senegal	41	--	14,943	2,300
Sierra Leone	41	136	17,114	2,160
Togo	--	163	29,706	2,210
Upper Volta	--	182	92,759	2,060
EASTERN AFRICA				
Burundi	--	150	60,000	2,330
Ethiopia	39	--	71,797	1,980
Kenya	48	--	7,829	2,200
Malagasy Republic	38	102	--	--
Malawi	39	120	37,982	2,400
Mauritius	60	65	3,886	2,370
Mozambique	41	--	14,779	2,130
Reunion	--	58	2,543	
Rhodesia	51	122	6,579	2,550
Rwanda	41	133	62,787	1,900
Somalia	39	190	18,725	1,770
Tanzania	41	162	29,705	1,700
Uganda	48	160	9,512	2,160
Zambia	44	159	13,518	2,250

(1) 1973 World Population Data Sheet, Population Reference Bureau, Inc.
(2) Statistical Yearbook, 1972, Table 202, p. 747.
(3) Statistical Yearbook, 1972, Table 162, p. 524-530.

Table III (Continued)

AFRICA: SELECTED HEALTH INDICATORS[1]

	Life Expectancy at Birth	Infant Mortality	Population Per Physician[2]	Daily Per Capita Caloric Intake[3]
MIDDLE AFRICA				
Angola	34	192	8,354	1,910
Cameroon	41	137	25,956	2,230
Central African Republic	--	190	38,333	2,170
Chad		160	60,317	2,240
Congo (People's Republic of)	41	180	8,571	2,160
Equatorial Guinea	41	--	35,000	--
Gabon	--	229	5,104	2,180
Zaire	--	115	33,713	2,040
SOUTHERN AFRICA				
Botswana	41	175	15,854	--
Lesotho	44	181	31,000	--
South Africa	49	138	1,502	2,730
Namibia (Southwest Africa)	39	--	--	--
Swaziland	41	168	7,885	--

Table IV

SUGGESTED PRIORITIES FOR INSTITUTIONAL DEVELOPMENT

1. Country With a Population Larger Than Ten Million and Supporting Family Planning Activities

Well Established Institutions

University of Ibadan
University of Lagos

Developing Institutions

University of Benin
University of Ife
University of Nigeria (Enugu)
University of Nairobi
University of Dar Es Salaam
Université Nationale du Zaire (UNAZA

2. Countries With Less Than Ten Million Population and Supporting Family Planning Activities

University of Ghana
Ecole de Medecine du Mali

3. No Governmental Support for Family Planning Activities but Important Institution and/or Population Interest

University of Zambia
Centre Universitaire des Sciences de la Santé, Cameroon
Université d'Abidjan
Haile Selassie I University

4. Residual Category

University of Liberia
University of Dakar
Public Health College, Gondar, Ethiopia
Various schools of paramedical personnel

Chapter 8

HEALTH AND FERTILITY REGULATION

TEACHING AND RESEARCH POTENTIALS IN THE NEAR EAST AND NORTH AFRICA

I. BACKGROUND

1. Demographic Characteristics

Generalizations about the socio-economic characteristics of states and countries in the Near East and North Africa are hazardous. This is particularly true because twenty-six countries are represented in this inventory, and their total populations are close to 300 million. Rather than try to draw the data together for the purposes of comparison, we have prepared a chart that shows certain statistical indicators of the region covering population, size, and various demographic indices (Table I). (All statistical data were obtained from "1973 World Population Data Sheet -- Population Reference Bureau, Inc.")

2. Health Systems in the Region

As Berger notes,[1] recent years have seen extraordinarily rapid social change throughout the Near East (and North Africa). Several factors have contributed to this change. Among them are the growth of literacy, mass communication, education; the growth of urbanism; spread of nationalism, socialism, and democracy as doctrines of political and economic right; entrance of large numbers of villagers into cities and increase in factory labor; introduction of new tools and methods in farming,attenuation of religious authority; growth of national states and national feeling; birth of new family relationships including a growing equality of women and loosening of both male domination

---

1. M. Berger, The Arab World Today, New York: Doubleday & Co., 1964, p.390.

Table I

VITAL STATISTICS

NEAR EAST AND NORTH AFRICA

Region or Country	Population Estimates Mid-1973 (millions)	Birth Rate	Death Rate	Annual Rate of Population Growth (percent)	Number of years to Double Population	Population Projections to 1985 (millions)[1]	Infant Mortality Rate[2]	Population under 15 Years (percent)	Population over 64 Years (percent)	Life Expectancy at Birth		Per Capita Gross National Product (US $)
										M	F	
Algeria	15.5	50	17	3.3	21	23.9	86	47	L	—51—		300
Egypt	36.9	37	16	2.1	33	52.3	118	43	L	—53—		210
Libya	2.1	46	16	3.1	23	3.1	—	44	5	—52—		1,770
Morocco [10]	17.4	50	16	3.4	21	26.2	149	46	L	—51—		230
Sudan	17.4	49	18	3.1	23	26.0	121	47	—	—48—		120
Tunisia	5.6	38	16	2.2	32	8.3	120	46	L	—52—		250
Bahrain	0.2	50	19	3.1	23	0.3	—	44	L	—		550
Cyprus	0.6	23	8	0.7	77	0.7	26	33	7	—		950
Gaza [11]	0.5	44	8	3.6	19	0.8	—	50	L	—		—
Iraq	10.8	49	15	3.4	21	16.7	104	48	5	—52—		320
Israel	3.1	28	7	2.1	29	4.0	23	33	7	70	73	1,960
Jordan	2.6	48	16	3.5	21	3.9	115	47	L	—53—		250
Kuwait [12]	0.9	43	7	9.8	7	2.4	39	38	L	—64—		3,760
Lebanon	3.1	—	—	—	—	4.3	—	—	—	—		590
Oman	0.7	50	19	3.1	23	1.1	—	—		—		350
Qatar	0.1	50	19	3.1	23	0.1	—	—	L	—		1,730
Saudi Arabia	8.4	50	23	2.8	25	12.2	—	—	—	—42—		440
Syria	6.8	48	15	3.3	21	10.5	—	47	L	—53—		290
Turkey	38.6	40	15	2.5	28	52.8	119	42	L	—54—		310
United Arab Emirates	0.1	50	19	3.1	23	0.2	—	32	L	—		2,390
Yemen Arab Republic	6.2	50	23	2.7	25	9.1	—	—	-	—42—		80
Yemen, People's Republic of	1.4	50	21	2.9	24	2.0	—	—	-	—42—		120
Afghanistan	18.3	51	27	2.4	29	25.0	—	45	L	—38—		80
Iran	31.1	45	17	2.8	25	45.0	—	46	L	—50—		380
Pakistan [13]	68.3	51	18	3.3	21	100.9	142	45	L	—		100

and parental authority; emergency of new political forms, from constitutionalism to new kinds of military rule; creation of Western secular legal codes and increasing use of science and technology in industry, agriculture, and medical care.

These developments and changes have led to three or more universal consequences in the field of health: (1) popular discontent with the existing state of affairs, (2) rising expectations and a general tendency to look to the government for an improved level of personal and national well being, and (3) a growing dependence of national governments and political careers upon the ability of governments to satisfy the minimum of popular needs and expectations of the population at least in terms of services, including health services. The growing awareness of the general public of their rights and needs in the field of health and their dependence on their governments is, of course, not limited to the Near East and North Africa. Throughout this area, particularly since the Second World War, governments have, with some exceptions, attempted to promote: (1) public responsibility for health protection and medical care; (2) health services that are free or low cost and accessible, particularly for those who are unable to pay for them; (3) health programs that are nationally planned and organized with, to some extent, central control of policy, but decentralized responsibility for delivery of services; (4) an emphasis on prevention, maternal and child health, industrial hygiene, and community medicine; (5) public support of medical education and research; (6) raising the standard of living as the essential basis for public health; (7) the growth of the application of social insurance schemes at least in the industrial if not the agricultural sector.

Even though the objectives of many countries in the region have been

a bit lofty, on the practical side there has been considerable progress in the field of health protection of the population since the Second World War. It is, however, extremely difficult to measure this progress, and it is even more difficult to know exactly what university level health training establishments have contributed to it. One suspects that they are contributing less than they would like to convince the public they are contributing -- particularly given the costs associated with training physicians.

In another section of this report, some implied criticism may be understood with regard to certain programs for the training of physicians in the Near East and North Africa. Our negative picture of health service and training in the area should not be taken out of context. Public health services are in their infancy, and it is highly inappropriate to expect countries that have only recently achieved independence and only recently created medical and paramedical training facilities, to achieve the standards and levels of the Western world. (In some countries in the West standards are not always high or equitable.) Unfortunately, it is these very infant public health services and health training institutions in the Near East and North Africa that are being encouraged to emphasize family planning activities. The major problems associated with the delivery of health services in the region, which will make the strengthening of family planning efforts difficult, are twofold: The first is the limitation of human resources and, to a lesser extent in some countries, material resources. The other is the inefficient application of the broad designs for the delivery of care drawn up in Ministry of Health planning offices.

To elaborate on the first point, the health infrastructure throughout the area tends to be weak. Nonetheless there is an extraordinary variation in infrastructure within the region. Table II, "Health Establishments (with beds)

Table II

HEALTH ESTABLISHMENTS (WITH BEDS)

NEAR EAST AND NORTH AFRICA

Country		Total No. of Hospitals	Total No. of Beds	Government Hospitals	Government Beds	Beds per 10,000 Population	Maternity/ Pediatrics Hospitals Special	Maternity/ Pediatrics Hospitals General
Afghanistan		55	2,479	52	2,324	1.4	65	...
Bahrain		...	...	10	907	41.2 G	30 G	238 G
Cyprus		129	3,488	26	2,003	67.6	433	...
Democratic Yemen		17	1,222	...	...	9.0	90	...
Egypt		1,418	75,634	1,246	65,873	21.4	815	...
Iran		508	39,151	191	21,935	13.1	4,463	3,295
Iraq		151	18,565	135	18,069	19.0	1,294	...
Israel		88	17,369	30	8,917	57.7	120	2,912
Jordan (East Bank)		27	1,892	12	1,274	10.7	210	...
Kuwait		26	4,009	18	3,635	48.3	758	333
Lebanon		150	11,820	23	...	43.8	662	...
Libyan Arab Rep.		86	9,079	46	8,803	43.6	1,136	1,183
Oman		15	562	...	...	8.0	50	...
Pakistan		2,690	33,401	...	...	6.0	447	2,943
Qatar		...	...	6	636	79.5 G	165 G	...
Saudi Arabia		67	8,891	...	...	11.2	594 G	...
Somalia		55	5,070	...	...	17.7	0	...
Sudan		...	...	681	15,042	9.5 G	38 G	1,480 G
Syrian Arab Rep.		79	5,945	31	4,786	9.1	330	...
Tunisia		88	12,834	...	...	24.5	367 G	1,553 G
U.A. Emirates		18	1,492	18	1,492	75	...	...
Yemen Arab Republic		27	4,573	...	...	7.9	...	...
Turkey	('74)	858	97,564	757	92,643	24.8	3000	1176
Morocco	('71)	140	22,727			14.9		
Spanish Sahara	('71)	6	258			51.5		
Algeria	('69)	149	39,053			28.1		

... Data not available G = Government service November 1973

Statistical tables in this report are modified from figures kindly provided by the WHO Eastern Mediterranean Regional Office.

Near East/North Africa," demonstrates quite clearly the differences in terms of numbers of hospitals and, of course, most importantly the number of beds per 10,000 population in the area. The figures must be used with extreme caution, for they tell us nothing about the quality of service, the urban/rural distribution of facilities and beds, or costs to the public. The entire health system is, with a few isolated exceptions, characterized by a continuing shortage of physicians in rural areas and paramedical and auxiliary personnel in all areas (Table III). Trained researchers, psychiatrists, social workers, and medical administrators are virtually unknown in some areas. The system is also characterized by the maldistribution of specialists and technical facilities. With respect to second line resources -- such as facilities for the care and rehabilitation of the chronically ill and disabled -- the accomplishments of many of these countries appear limited.

With regard to the second major deficiency mentioned above, it should be noted that not only are the broad designs not applied, but also basic concepts of comprehensive health planning, in many instances, are lacking.

We have prepared two charts from WHO data. They are sufficient, we believe, to indicate the problems found in the area in terms of health infrastructure and personnel (Tables III and IV).

3. Population Policy in the Region

Table V shows in some detail the national positions on the subject of population policy. One country (Israel) has an explicit policy aimed at increasing its growth rate. Possibly eleven countries -- mostly rather small countries in terms of population size -- appear to favor increased growth rates and have neither government nor private association family planning activity. Algeria has an implicit policy to decrease its population growth, but not

Table III

MEDICAL PERSONNEL*

NEAR EAST AND NORTH AFRICA

Country	Number of			Number per 10,000 Population of			Number of Schools of		
	Physicians	Dentists	Pharmacists	Physicians	Dentists	Pharmacists	Medicine	Dentistry	Pharmacy
Afghanistan	937	4	31	0.5	0.0	0.0	2	0	1
Bahrain	116	4 G	4 G	5.5	0.2 G	0.2 G	0	0	0
Cyprus	562 R	185 R	210	8.6	2.8 R	3.2	0	0	0
Democratic Yemen	117	20	5	0.9	0.2	0.0	0	0	0
Egypt	18,802 R	2,511 R	6,665 R	5.5 R	0.7 R	1.9 R	9	3	5
Iran	9,470	1,962	3,316	3.2	0.6	1.1	7	4	3
Iraq	2,890	309	379	3.1	0.3	0.4	3	1	2
Israel	7,723 R	1,535 R	1,835 R	25.6 R	5.1 R	6.1 R	4	1	1
Jordan (East Bank)	826	117	241	3.5	0.7	1.4	1	0	0
Kuwait	744	67	163	9.0	0.8	2.0	1	0	0
Lebanon	1,831	531	612	6.8	2.8	2.6	1	1	1
Libyan Arab Republic	1,525	130	310	7.3	0.6	1.5	1	0	0
Oman	78 G	1	2	1.1 G	0.9	0.0	0	0	0
Pakistan	14,061 R	377 R	...	2.6 R	0.1 R	...	11	4	2
Qatar	78	4 G	3 G	9.7	0.5 G	0.4 G	0	0	0
Saudi Arabia	770	...	50	1.0	...	0.1	1	0	1
Sudan	1,168	64	306	0.7	0.0	0.2	1	1	1
Syrian Arab Republic	1,673	445	874	2.6	0.7	1.4	2	1	1
Tunisia	797	65	238	1.7	0.1	0.5	1	0	0
U.A. Emirates	211	12	16	10.6	0.6	0.8	0	0	0
Yemen Arab Republic	222	...	...	0.4	...	...	0	0	0
Turkey ('71)	16,514	3,517	3,477	4.6	1.0	1.0			
Morocco ('71)	1,163	162	373	.7	.1	.2			
Spanish Sahara ('71)	53	3	4	10.6	.6	.8			
Algeria ('69)	1,698	222	265	1.2	.2	.2			

... Data not available
0.0 Magnitude less 0.5

R = Registered
G = Government service

* All figures (some revised) from WHO Alexandria

Table IV

PARAMEDICAL PERSONNEL*

NEAR EAST AND NORTH AFRICA

Country	No. of Medical Assistants	No. of Nurses and Midwives	No. of Assistant Nurses and Assistant Midwives	Nursing Midwifery Personnel per 10,000 Population	No. of Medical Laboratory Technicians	Number of X-Ray Technicians	Number of Sanitarians & Sanitary Inspectors
Afghanistan	0	262	637	0.5	72	180	3
Bahrain	0	488 G	273 G	23.9	21 G	10 G	7 G
Cyprus	0	412	969	18.3	37	50	97
Democratic Yemen	...	153	238	...	24	19	28
Egypt	0	7,528 R	31,202 R	7.5 R	3,353 R	633 R	1,710 R
Iran	65	4,922	7,665	2.5	738	216	73
Iraq	1,193	1,232	2,111	1.7 G	250 G	225 G	224 G
Israel	0	7,561	9,873	34.0	618	524	278
Jordan (East Bank)	0	505	1,726	6.6	24	69	69
Kuwait	0	1,753	1,253	21.9	74	96	70
Lebanon	0	1,821	707	9.4	118	...	98
Libyan Arab Republic	0	3,199	2,116	15.4	353	240	127
Oman	24	132	74	1.9	16	8	6
Pakistan	...	5,169 R	2,642 R	1.4 R	...	...	1,242 R
Qatar	0	200 G	28 G	23.1 G[b]	14 G	10 G	8 G
Saudi Arabia	0	2,057	...	2.5 G[b]	183 G	97 G	...
Sudan	1,239	187	11,112	5.8	66	99	...
Syrian Arab Republic	0	2,003	854	3.0	...	...	...
Tunisia	0	3,214	4,361	13.1 G	...	13 G	...
U.A. Emirates	...	585	215	29.3	51	11	12
Yemen (Arab Rep.)	...	...	...	...	...	...	...
Turkey ('74)	...	9848	20002**	10.0	434	267	381
Morocco ('71)			...				
Spanish Sahara ('71)			47**				
Algeria ('69)			5,147**				

... Data not available
b Nursing personnel only

R = Registered
G = Government service

* All figures (some revised) from WHO Alexandria
** Midwifery personnel and nursing personnel

Table V

TAXONOMY OF POPULATION POLICIES*

NEAR EAST AND NORTH AFRICA

Government Policy	Annual Growth Rate 2.0 to 2.4	2.5 to 2.9	3.0 to 3.4	3.5+
Explicit to increase population growth rate	Israel			
Not explicit, but government probably favors increase in growth rate; no family planning	Spanish Sahara	Saudi Arabia Democratic Republic of Yemen	Palestine (Gaza) Bahrain Oman Yemen Arab Republic	Kuwait Qatar United Arab Emirates
Not explicit, but government favors same or decreased growth rate; family planning	Afghanistan Cyprus	Lebanon Sudan	Iraq (quasi-governmental) Jordan Syria	
Explicit to decrease growth rate; some government family planning				Algeria
Explicit to decrease growth rate; national family planning programs		Tunisia Turkey Egypt	Iran Morocco Pakistan	

* Adapted from M.C. Thorne and J. Montague, International Journal of Health Services, Vol.3, No.4, p. 783.

through family planning, though the government supports a family planning program for health reasons. Lastly, virtually all the larger countries in the region (Turkey, Egypt, Iran, Morocco, Pakistan, and Tunisia) have explicit policies to decrease growth and have national family planning programs. The opposition to serious thought about the implications of population growth comes from a number of quarters. (Two sources for materials on the various positions on population and family planning programs are Dr. Isam Nazer, et al, Islam and Family Planning, Beirut: IPPF, 1974; and Dr. M.C. Thorne and J. Montague, International Journal of Health Services, Vol. 3, No. 4, 1974.)

4. Family Planning

Detailed information on the family planning situation is contained in the country reports. Basically the region can be divided into countries with:

A. Government supported family planning programs (but no private association):

Algeria

B. Government or private programs, and/or a combination of the two:

Afghanistan, Egypt, Iran, Iraq, Jordan, Morocco, Pakistan, Tunisia, Turkey

C. Private or university based programs only:

Israel, Lebanon, Sudan, Cyprus, Oman (1 hospital)

D. No programs or projects at the present time:

Bahrain and Syria - program being developed

2 Yemens, Qatar, Kuwait, Libya, Saudi Arabia, Mauritania

Unlike the programs in Asia, national family planning programs in the Near East are not characterized by their demographic effectiveness. When

one surveys the broad spectrum of governmental efforts, operationally, in the field of population planning, there seems nothing particularly striking about the difficulties faced by the Family Planning Division of the Ministry of Health in many of the countries. Administratively, some of the difficulties are perhaps endemic to the bureaucratic and managerial environment of the region. The real problems in the area are high fertility norms, the insecure place of preventive medicine programs in health delivery systems already overburdened with clinical work, and the lack of social consciousness of medical and paramedical personnel. These are problems that are not easily solved through medical education. The selection of culturally acceptable and effective approaches to motivating individuals to limit the number of their children could be more effective. However, in the last analysis the ability of even a well-trained physician to manipulate the variables associated with national family planning programs are limited. Some of these problems have been outlined in "Key Problems Impeding Modernization of Developing Countries:"[2]

"a. The effectiveness of contraceptive technology -- effective methods exist, but, except for sterilization and IUD's, the need for repetitive use compromises results in the absence of periodic supervision. Current technology is still highly limited when seen from the perspective of a family that seeks to have no more than two children over a period of 25 to 30 years.

"b. The acceptability of contraceptive technology -- the side effects of many methods, particularly hormonal treatment and IUD's, reduce acceptance even though the actual physical risks may be comparatively small.

---

2. The Health Issues, USAID, pp.33-34.

Public reactions are difficult to correct in absence of trained personnel.

"c. Accessibility of family planning services -- requisite cooperation over the entire male and female reproductive period requires access to an infrastructure through which services can be made available. Such accessibility implies nation-wide geographical coverage as well as availability of trained personnel. Currently less than 10 percent (on the average) of developing populations have access to an adequate distribution system of requisite services.

"d. Affordability of family planning services -- long range, open-ended requirement for services, when taken into consideration with limited national resources for providing services, precludes the establishment of duplicate delivery systems, one for health and the other for family planning. Accordingly, because of resources restraints, most developing governments have opted for provision of services through the health infrastructure.

"e. Motivation -- illiteracy, poor communication, and the continuing high burden of disease and death in young children pose major problems for the rapid acceptance of family planning services."

No doubt a partial solution to the lack of high level medical manpower, its costs, and the difficulties of establishing a sueful dialogue between medical personnel and traditional clients in the Near East and North Africa would be the increased use of medical auxiliaries (particularly women) to deliver certain types of services. (Another solution is to make contraceptives widely available through commercial channels.) However, throughout the Near East (and the Western world) there is a significant resistance to the debasement of the health system by infiltrating it with "less qualified" individuals. More importantly, the traditional attitudes toward women and

their employment pose problems. Certainly these difficulties are common to a large number of countries with family planning programs. They appear to be exacerbated in the Near Eastern countries because of the extraordinarily rich mix of cultural and linguistic groups in the area, the low level of living, and low literacy, as well as a wide variety of climatic and geographic settings.

II. UNIVERSITY LEVEL MEDICAL AND PARAMEDICAL TRAINING IN POPULATION IN THE NEAR EAST AND NORTH AFRICA

1. Education in the Region

To date accurate statistical information on education in the Near East and North Africa is lacking.[3] It appears that higher education has developed extremely rapidly in the last two or three decades. It has done so after what appears to have been some centuries of relative stagnation, most particularly in the technical and scientific fields. The reasons for the retardation are many. One of the most important factors responsible for intellectual and educational stagnation was the wrong interpretation of "acceptable knowledge." Although knowledge was highly valued and its quest always considered important, factors that permitted Islam to make unique contributions to world civilization, its very importance led quickly to precise definition and the view that what lay beyond was not proper for inquiry. Freedom of thought was never a central value of Muslim society and culture; rather, the emphasis lay upon acquiring as much of the accepted wisdom as possible.[4] Thus it has been only relatively recently that secular type

---

3. UNESCO: "Trends in General, Technical and Vocational Education in the Arab States," Paris, 1970, mimeo, pp.18-20.

4. J.S. Szyliowicz, Education and Modernization in the Middle East, Cornell University Press, 1973, p.71).

universities and colleges have been founded in the Near East. As Szyliowicz notes, "Higher education is free in many Arab countries including Egypt, Iraq, Jordan, Lebanon, Libya, Syria, and Saudi Arabia, and there has been an increase in the fellowships available to students from poor countries. However, most students are still drawn from the middle and upper classes and are basically urban in origin. Of the 37 colleges, universities, and higher institutes of various sorts in the region, 19 have been established since 1950. The total student population rose from 145,000 in 1951 to 241,000 in 1963-64. The dramatic increase in enrollments has been particularly noticeable in the social sciences and humanities. Except for Egypt, the large majority of students are registered in these faculties. In the mid-sixties the figures were as follows: Syria, 85 percent; Libya 81 percent; Saudi Arabia 86 percent; Lebanon 73 percent; Sudan 67 percent; Iraq 62 percent."[5]

Waardenburg[6] has summarized the principal negative characteristics associated with higher education in the Arab world. We will paraphrase some of his findings, as they represent one of the most perceptive accounts of the problems associated with university education in general (and medical education in particular) in the Arab Near Eastern countries as well as, by association, the countries of the Northern Tier and North Africa. He notes the explosive growth in enrollments since 1950, which has resulted in an overloading of some teaching personnel; that higher education often remains primarily scholastic and of low quality; that professors are often poorly paid; that universities suffer from administrative deficiencies; and that

---

5. Ibid. p. 318.

6. Ibid. pp. 320-321. Quoted from Jean-Jacques Waardenburg, Les Universites dans Le Monde Arabe Actuel, Paris: Mouton, 1966, Vol. 1.

the Arab university is above all a teaching institution where research is limited.

2. Medical Education in the Region

There is a tendency to examine the universities and their medical faculties utilizing the images and models that the medical and public health fraternity in the West subscribe to. This is dangerous. It is extremely difficult to analyze and compare academic institutions in such widely differing environments as one finds in the Near East and North Africa. It appears, however, that the medical schools do have a number of characteristics in common: (1) They are educational institutions, with training and some research activities in the field of medical and occasionally community medicine, preventive medicine, and public health. (2) The schools are located in developing or recently independent societies all of which have certain developmental characteristics in common. (3) Almost all the medical schools received or receive certain technical or financial assistance from outside sources, whether in the form of bilateral or multilateral grants or in the form of manpower. (4) The medical schools and the universities deliberately hope to shape or otherwise introduce change into the administration of health delivery and medical care practices in their countries. (5) The universities are, by and large, with the exception of those in Egypt, relatively young.

It is true also that no cohesive comparison of all the medical schools has ever been undertaken. One general report published on a number of schools in Turkey, Iran, and Pakistan was published in 1970.[6] From this

---

6. "Stebbins Evaluation:" Preliminary Report of the Consultant to the U.S. Economic Coordinator for CENTO, CENTO Conference Series on the Teaching of Public Health and Public Health Process, February 1970, CENTO, p.130.

(Stebbins) report and others we have available, it might appear that as long as physicians are trained at largely public expense with only a minimal obligation to serve the public (as opposed to earning money and/or working in urban areas), it is unlikely that the medical schools will make a truly significant contribution to the development of efficient, large scale national family planning programs. Increasing numbers may be trained in the years ahead. That no doubt will be useful in disseminating knowledge in contraceptive technology, though many will specialize, go into private practice, or migrate. Populations in the region are doubling every twenty-five to thirty years, and the ratio of physicians to population -- which is already hopelessly inadequate for clinical (much less public health) purposes -- will thus continue. The population and family planning component of the medical school curriculum should be increased and expanded. Such expansion, though it has considerable potential to legitimate population knowledge, will not be nearly enough as long as health systems have the following characteristics: (1) an emphasis on curative rather than on preventive medicine; (2) relatively high standard of medical care available to a favored few and the relative lack of anything but palliative or symptomatic treatment for the disadvantaged many; (3) emphasis on developing thoroughly modern and very expensive university medical centers in the capital cities, and the neglect of rural clinics where most of the people are; (4) money and time placed on the training of a few specialists and an indifference to the need for less extensively-trained, but nevertheless well-trained, sanitarians, midwives, public health nurses, assistant medical officers and so on.[7]

---

7. R.N. Rao, "Educational Adaption to the Factors Bearing on Medical Education in the Developing Countries," in "Manpower for the World's Health," The Journal of Medical Education, September 1966, Vol. 41, No. 9, p. 256.

3. Paramedical Education

As noted above there is no reason to be optimistic about the availability of an adequate number of physicians in the foreseeable future. This is particularly true for rural areas. Some countries such as Iran (with 450 Pakistani doctors), the Persian Gulf states, and the North African countries will have to depend on imported physicians for decades to come if the present systems of health delivery are maintained. Certain other nations, such as Turkey, might have a sufficient number of physicians if many did not migrate to the United States and if an appropriate mix of incentives could be devised to attract them to rural areas or government service.

As noted previously, the problem of inadequate numbers and the poor distribution of physicians is not peculiar to the Near East and North Africa. Indeed this is a major problem in the United States.[8] In any event, given the existence of what will be a persisting shortage of physicians in the Near East and North Africa in the years to come, it might appear that the role of medical auxiliaries and paramedical personnel will take on added significance. Unfortunately, "medical schools in the developing countries have done little in the way of conducting or supporting education of auxiliary personnel. They have stood more or less aloof and concentrated on training professional nurses, physicians, and public health personnel, at levels of academic accomplishment and in quantities insufficient to meet the needs of their rural populations."[9]

---

8. Journal of the American Medical Association, June 10, 1974.

9. A. Peter Rudermann, "Economic Factors in Medical Education in the Developing Countries," in "Manpower for the World's Health," The Journal of Medical Education, September 1966, Vol. 41, No. 9, Part 2, p. 162.

Nonetheless, in spite of their low status, the development of paramedical and auxiliary medical education in the Near East and North Africa is heartening. To some extent this development is associated with the liberation of women. Before that time, nursing services in the hospitals were carried out solely by untrained men and women or there was a very limited number of nurses trained in the few foreignly supported hospitals of the country.

In order to understand the spectacular growth in paramedical training of women, here are a few examples. In 1948 the total number of registered nurses in Pakistan was 370 (after 75 percent of the pre-Pakistan nurses had been evacuated). In 1954 the number of registered nurses was estimated at 1,076 including 106 male nurses. The fact that there were only 1,600 registered nurses in Pakistan in 1956 in comparison to 6,000 doctors, however, indicates the stage of nursing development in that country. The first nursing school was established in Egypt only in the mid-50's, and in Iraq only in the mid-60's.

The opening of the Red Crescent (Red Cross) training school for nurses in Turkey in 1925 marked the beginning of nurses training in Turkish institutions. Before that time nurses had been trained in the various foreign supported hospitals in the country. During the course of the development of nursing training in Turkey the status of the profession has changed considerably. The progressive steps in government policy which have assisted in this development have been described in Woodsmall.[10]

Woodsmall, Woman and the Near East, Middle East Institute, 1960, pp. 19-20.

The first group of six women students graduated from the University of Istanbul Medical Faculty in 1930. In 1973, one-third of the physicians in Turkey were females. Some fore-most leaders in the medical profession in Turkey are women and one has occupied the seat of Minister of Health in 1972. They have also been most visible in the auxiliary services. Ten thousands of women have been and at present are working as nurses, midwives and their assistants, technicians, and medical secretaries.

The Midwifery School of the Istanbul University has a historical value in that it is the first one of its kind. It is now closed. The total graduates of this school are no more than a few hundred. There are more than 10,000 graduated from other schools.

In Iran the utilization of women in the government's health services has generally increased over time. However, the road upward has been a difficult one. In 1949, for example, the estimated number of nurses at the nurses training schools (less than ten) in Iran was only 360 for a population that was estimated to be approximately 18,000,000. The mission hospitals, of course, had on their staffs nurses whom they had trained themselves. Since then, two types of training of auxiliary medical personnel has been initiated -- for auxiliary or nurses aids and midwives. Village midwifery programs were started as well. An interesting change in the nursing situation is the fact that before Reza Shah there were practically no Muslim nurses.

Because of the very considerable importance we attach to the training of paramedicals we have prepared tables providing detailed information for all Near Eastern and North African countries (See Appendix). Detailed information is available on all categories of health personnel for Turkey, Tunisia, Cyprus, Democratic Yemen, Jordan, Pakistan, Israel, Libya, and Sudan. Topics covered are: category of personnel, admissions requirements (for training), number of schools, number of students, and number of graduates.

III. CONCLUSIONS AND RECOMMENDATIONS

1. Conclusions

From the previous picture certain generalizations are possible regarding medical and paramedical education in the Near East and North Africa.

A. Increasing emphasis is being placed on medical education, and new medical schools have recently been opened in a number of countries and are contemplated in others.

B. There is an increasing percentage of women entering medical schools and being trained in the paramedical fields.

C. There is, in a number of countries, an integration of the curriculum so that pre-clinical and clinical phases of the undergraduate curriculum are being merged.

D. There is an increasing community-orientation under which some attention is being given to departments of social and preventive medicine, some of which are making appreciable efforts to expose medical students to medicine on a community-oriented basis instead of giving them experience that follows the traditional clinical-oriented approach.

E. In some countries the techniques of teaching are being changed

so that wider use is being made of audiovisual materials, programmed instructions, objective examinations, and other developments.

In spite of these signs of progress there are major weaknesses that beset the training of physicians in the area. Some of these weaknesses can perhaps be overcome by the medical schools working in concert with the donor agencies to become more responsive to the needs of the population.

2. Recommendations

The well-known Coggeshall Report, which examines medical education in the United States today, has pointed out: "Those responsible for medical education, faculty members, deans, university officials, trustees, legislators, will, in decades ahead, need to devote careful attention to appraise the needs of society for health care and health personnel into developing and implementing plans to meet those needs. Failure to do so will damage the standing of the profession and educational institutions and will invite -- even make necessary -- less desirable approaches to meeting the health care needs of a growing America. If those responsible for medical education fail to assume and act on a responsibility that is now clearly theirs, it will be assumed by others."[11] The same quote applies to the Near East and North Africa where the alternative uses of population funds should be examined. Costs and benefits should be given serious attention. Medical training is the development of knowledge, but it is also an investment in people. It should pay a return on

---

11. Professional School and World Affairs, New York Education and World Affairs, 1967, p. 31.

Table VI

COUNTRIES WITH MEDICAL SCHOOLS

Country	Number of Medical Schools	Name	Interest in Population and Family Planning Teaching	Priority for Assistance
Afghanistan	2	University of Kabul	Minimal	Low
		University of Nangarher	Minimal	Low
Algeria	3	Oran	Minimal	High
		Algiers	Minimal	High
		Constantine	Minimal	High
Arab Republic of Egypt	6	Cairo	High	High
		Mansura	Low	High
		Assuit	High (multi-disciplinary)	High
		Ein Shams	High	High
		Al Azhar	High (multi-disciplinary	High
		Alexandria	High	High
Saudi Arabia	1	University of Riyad	Minimal	Low
Iran	7	University of Tehran	High	Medium
		National University	Minimal	Low
		Tabriz University	Medium	Medium
		Jondi Shapoor University	Low	Low
		Pahlavi University	High (multi-disciplinary)	Medium
		Meshad University	High	High
		Isfahan University	Medium	Low
Israel	2	Hebrew University	Low	Low
		Tel Aviv University	Low	Low
Iraq	3	Baghdad University	Low	Medium
		Mosul University	Low	Low
		Basra University	Low	Low
Jordan	1	University of Jordan	Low	Medium
Kuwait	1	University of Kuwait	Low	Low
Lebanon	2	American University Beirut	Medium	Medium
		St. Joseph	Low	Low

Table VI (Continued)

Country	Number of Medical Schools	Name	Interest in Population and Family Planning Teaching	Priority for Assistance
Libya	1	University of Libya	Low	Low
Morocco	1	Mohamed V University	Low	Medium
Pakistan	6	Dow Medical College	Medium	Medium
		King Edward Medical College	Medium	Medium
		Fatimah Jinnah Medical Col.	High	High
		Bolan Medical College	Low	Low
		Liaquet Medical College	Low	Low
		Khyber Medical College	Low	Low
Sudan	1	University of Khartoum	Low	High
Syria	2	Damascus University	Low	Low
		Aleppo University	Low	Low
Tunisia	1	University of Tunis	Medium	Low
Turkey	11 (Facilities in 5 Medical Schools)	Istanbul University (3)	Low	Low
		Ankara University (2)	Medium	Medium
		Hacetteppe University (3)	High	High
		Ege University (1)	Low	Medium
		Ataturk University (2)	Medium	Medium
TOTAL	51			

Obviously, the ranking provided in the "interest column" and the priorities that we have established for assistance are in many instances very subjective. Two examples will suffice to show how difficult this procedure is. In the case of the Sudan, at the University of Khartoum there is a rather well developed and highly sophisticated program in the social sciences dealing with population matters. However, at the University of Khartoum Medical School there appears to be really only one physician who is actively involved in teaching and research in the field of family planning. We have, therefore, concluded that the interest at the University of Khartoum Medical School is low. On the other hand, we have ascribed a high priority to assistance, because we feel that the individual who is already exercising leadership in the field is capable of undertaking additional activity. In the Sudanese context one of the major points of leverage for population activity will probably come through the University Medical School, and the individual who is already doing teaching and service activity at the university is also one of the most active and influential members of the local international planned parenthood affiliate. In short, a low or minimal interest shown in the "interest" column does not necessarily mean that the medical faculty should be given low priority by donors.

Another example is Iran. The interest in population matters is relatively high at the University of Tehran and Pahlavi University. However, we do not necessarily feel that they should be given high priority for foreign assistance-- in the former because of the present fragmented nature of the program in Tehran, and in the latter because the university is already receiving funding from a number of donors and would probably be incapable of absorbing additional funds at this time.

In terms of assistance to university medical schools, we feel that the institution building possibilities are relatively better in a number of countries and less good in others. For the purpose of this paper, therefore, we will divide the countries into five categories:

Top priority	1. Egypt 2. Algeria 3. The Sudan
High priority	1. Iran 2. Turkey 3. Tunisia 4. Pakistan
Medium priority	1. Syria 2. Lebanon 3. Iraq 4. Morocco
Low to medium priority	1. Jordan
Low priority	1. Afghanistan 2. Libya 3. Kuwait 4. Saudi Arabia

TOP PRIORITY

1. Egypt. Of the three countries that we feel deserve top priority, Egypt has by far the highest. Of the six Egyptian medical schools, five ascribe relatively high priority to the teaching of family planning; the only exception is Mansoura. The Assuit and Al Azhar population centers -- when formed -- will be multidisciplinary. At Ein Shams Medical School some thirteen hours are devoted to the teaching of family planning, and it is also taught at the post-graduate level. At the University of Alexandria a considerable number of hours of teaching by the Department of Obstetrics and Gynecology also takes place. At the University of Cairo, while less than four hours of teaching family planning takes place by the Department of Obstetrics and Gynecology, there is teaching elsewhere at the university. At the same university the Department of

Health would like to initiate field work and this would present possibilities for collaborative effort.

Not only is there very considerable interest in the subject of population in medical schools in Egypt, but there is also considerable research. Indeed it would seem that with the exception of isolated instances of research in Lebanon, Pakistan, and Turkey, the bulk of the clinical, medical, and other research associated with family planning programs is now taking place in Egypt.

The Ford Foundation has made valuable contributions in terms of stimulating study of reproductive biology in Egyptian universities. However, there would be considerable merit in other types of donor activities, particularly in terms of university operational and action research with the government's family planning programs.

Lastly, Egypt is one of the largest countries in the region, and through its universities pass an extraordinary number of students from other parts of the Arab world. The Egyptian position on population growth is forthright, and it can thus exercise considerable leadership on neighboring countries through its graduates.

2. Algeria should also have top priority in terms of population work. There has been, and continues to be, an extensive analysis of the demographic and economic situation and growth rates. The government's policy is clearly that of achieving equilibrium between resources and people. They intend to do this through accelerating productivity to raise living standards. They feel this will, in turn, lower fertility more effectively than will a national family planning program. Simultaneously, with WHO assistance, there has been the start of a major effort to train paramedicals, in cooperation

with medical schools, to serve the public in MCH and family planning. Algeria can exercise leadership for the entire Middle East in the use of paramedicals. In short, there is a government policy that reflects "searching for information on demographic problems in the country; observing what is happening elsewhere, especially in the immediate neighboring countries; allowing very limited family planning activities; strong reliance on economic development to bring reduced fertility; and an appraisal and rejection of large scale national family planning programs."[12] There are clinics attached to each of the universities where family planning services are delivered. Apparently the demand is there. It would seem that support of the major national training program for delivery of services by paramedicals would logically be through the universities of Oran, Algiers, and Constantime. Algeria with its wealth of oil and openness to foreign technology is liable -- within the next decade or so -- to outstrip most of its Arab neighbors in terms of development. Its attitude towards population will be a critical influence in the Islamic world.

3. The Sudan. The University of Khartoum has the possibility of developing a sophisticated program in population on the social sciences side and has recently received a small grant from the Population Council to do research on family planning activities. There is some interest at the University of Khartoum Medical School (Department of Obstetrics and Gynecology) in the field of family planning. A demonstration area for medical students will include family planning as a normal part of MCH care, if WHO funds are ever approved. The major donors seem to have by-passed the Sudan in spite of its

---

12. Robert Lapham, mimeo.

interest and population problem. The University of Khartoum represents a remarkable opportunity for doing useful work.

HIGH PRIORITY

Among the high priority countries we would place Iran, Turkey, Tunisia, and Pakiston -- not necessarily in that order.

1. Iran. Although the Iranian government has had some difficulties in expending United Nations funding for population assistance through its Ministry of Health, and also while Iran's per capita income is reasonably high, there are a number of useful efforts that could be undertaken in Iran through the university system (see the country reports). The Pahlavi University program has been funded by USAID (through North Carolina), as well as Johns Hopkins and IDRC. The University of Tehran, while it has not received major outside support for population activity, does represent one of the very best critical masses of scientific personnel in the Near East. Because of the multiplicity of interest groups and schools and institutes, coordinating an integrated effort in population has been difficult until now. In the year ahead a truly multidisciplinary population center may be created, and if so, there will be many avenues for the support of projects and programs. In addition to the programs at the University of Tehran and Pahlavi University there may be possibilities of working with the Iranian university authorities to develop multidisciplinary activities at the University of Meshad and, perhaps in the social sciences, at the University of Tabriz. The University of Isfahan had one of the earliest activities in population in Iran, but it has never developed as vigorously as its leaders hoped it would.

2. Turkey. In Turkey, Haceteppe University with its Institute of Population Studies and Department of Community Medicine, has provided con-

siderable leadership in the field of population in the Near East. The university has received support from the Ford Foundation though a number of projects are handled by donors directly. There appear to be some opportunities for research and training that are not being exploited at other universities such as Istanbul (Department of Obstetrics and Gynecology), Attaturk University, and elsewhere.

3. Tunisia. The potential of Tunisia to develop university research and training in the field of population has never been clearly apparent. Population teaching does take place at the medical school for fourth year obstetrics and gynecology courses; and CERES, which is attached to the university, has undertaken considerable research. The Tunisian program was the first major governmental effort both in the Islamic world and in Africa, and there is no reason why the university could not undertake a more dynamic role in the training of medical personnel and the support of research.

4. Pakistan has one of the older and better developed programs. However, no independent public health oriented family planning research is being conducted in any of the six medical schools. There has been some talk of the establishment of a population center at one of the medical colleges, but this does not seem to have moved ahead. All medical schools in Pakistan must now give five hours of population and family planning training -- a remarkably small number of hours given the population pressures that Pakistan is facing. Only one university, Fatimah Jinnah, has a week of field training associated with its program. Pakistan is remarkable not for the interest or the activities of its university medical schools in population, but rather for the program-related training and research activities which have been undertaken by the ministries and organizations involved in the delivery of services.

the investment. Whatever the cost may be, the slippage in the present system is enormous and donor community funds for institutional development should be used judiciously.

Physicians trained at state expense in the Near East and North Africa invariably seem to have almost no obligation to the state. When they do feel an obligation, it is usually no greater than the normal citizen, even though the cost of their training is far heavier. The costs are enormous and the inequities for the taxpayer remarkable. With this in mind, before recommending the types of activities that might be undertaken by the donor community should they wish to work with medical schools, we might note which countries we feel should have highest priority.

There are twenty-six nations, ranging from extremely large or populous ones such as Egypt, to small islands in archipelagos whose populations are far less than a million, such as Bahrain and Qatar. Nine of the twenty-six nations (Bahrain, Cyprus, Democratic Yemen, Mauritania, Qatar, United Arab Emirates, Yemen Arab Republic, Spanish Sahara, and Somalia) have no university level medical training institutions. In the seventeen remaining nations, there is a total of fifty-three medical schools or medical faculties. In Turkey in 1974 there were 9 operating medical schools plus 6 schools as yet unopened.

For the sake of simplicity we have prepared a chart of the countries with medical schools. We have indicated what we think is the interest shown in "population" and "family planning" at the respective medical schools (ranging from minimal, to medium, to high) and lastly we have ascribed our impressions of the priority that might be given to donor assistance to these medical schools in terms of population funding (Table VI).

There may be opportunities for university linkages with the Training Research and Evaluation Center (TREC) in Lahore. The NRIFC seems to be on the decline.

MEDIUM PRIORITY

In the medium priority countries we would place Syria, Lebanon, Iraq, and Morocco. The latter two have government programs. In Morocco some family planning is taught at the university by individuals associated with the national family planning program, and the same appears to be true in Iraq at the University of Baghdad. In Lebanon there is very considerable interest in the subject of family planning in the Department of Obstetrics and Gynecology at the medical school and this should be encouraged in the future. The case of Syria is an interesting one, for they have a national interdisciplinary population commission, a new family planning association, and a new unit within the Ministry of Health to work on family planning. The political situation being what it is, it is unlikely that Syria is going to forge ahead very quickly in developing a national family planning program. Nonetheless, given the fact that there are medical faculties at Damascus and Aleppo with Departments of Obstetrics and Gynecology, there would be every reason to believe that donor support should in some small way be channeled to these universities.

LOW TO MEDIUM PRIORITY

In the category of low to medium priority countries, we would place Jordan. The political situation in Jordan is such that no major government effort seems likely in the future. However, correspondence with the university medical school would lead one to believe that the university's team training program is remarkably innovative. With their own resources,

medical work in the field of family planning could develop in due course. The university should be closely watched because of the highly innovative nature of its medical education program.

LOW PRIORITY

Low priority institutions are Afghanistan, Israel, Libya, Kuwait, and Saudi Arabia. As far as Libya, Kuwait, and Saudi Arabia are concerned there seems to be little likelihood, need, or interest in developing university medical school programs in the field of contraception. The local authorities are not likely to be interested, and the three countries concerned have sufficient resources to support their own programs should they wish to develop them. In Afghanistan it seems unlikely that there will be any interest in population teaching or training in the two university medical faculties in the immediate future. The case of Israel is a bit peculiar. The government of Israel encourages both the migration of Jews to Israel and high fertility norms in the Jewish population. A demographic center at the prime minister's office was created to initiate pronatalist measures recommended by the Israeli population committee. In spite of the official position of the government, it is understood that a number of family planning services are provided privately.

Specific, pragmatic activities of the type that can be undertaken by medical schools, or supported by the donor community in connection with the medical schools, or that might increase the relevance of these schools in family planning, are:

1. Provision of training materials.

Almost invariably in the medical schools visited, the paucity of audiovisual, library, and other training materials is striking. While some universities have developed their own training or instruction materials, or

have adopted materials developed elsewhere, or have instructors who have brought their notes and reprints from training courses abroad, these are invariably exceptions. Handouts for medical students are often little more than whatever seems to be on hand. In summary, the absence of good training materials and visual aids for teachers is probably a handicap of some importance throughout the area.

2. The fostering of coordination between teaching and service institutions.

With the possible exception of Haceteppe University in Turkey, the linkage between government and medical or other training facilities is tenuous. One of the results is that training and teaching objectives have tended to become more unrealistic, ill defined, and academic. Little information is provided at a number of medical schools and schools of public health on the real world and the problems of delivering clinical and public health care in the field. The clinical training of students in family planning techniques seem universally inadequate. One of the better ways of making academic programs more relevant is to emphasize community medicine and preventive medicine as seen in demonstration areas. Additional support appears needed to provide housing, transportation and other facilities associated with these demonstration areas.

3. Improving training in public health, program administration, and management and planning in medical schools.

Throughout the Near East and North Africa government programs in public health and family planning are handicapped by the inability of physicians and others to delegate or cope with the problems of administration, management, and supervision. The lack of adequate supervisory training at medical schools and in-service training programs has led to high turnover at national and regional levels among public health physicians who are ill-

equipped to face administrative tasks. To overcome this deficiency, support should be given to achieving better linkages between medical schools, on-the-job training, and site visits to on-going programs. With one or two exceptions schools of public health are not particularly suited to providing training for physicians in the skills associated with program management. This is particularly true in the field of health planning. Medical schools should give serious consideration to including these disciplines in their curriculum or more closely associate themselves with schools and departments that have training capabilities in these areas.

4. Improving teaching methods.

Many medical schools (as well as schools of public health) in the area use training methods that appear to the casual visitor as ineffective and in some instances inappropriate. Certainly there is still excessive reliance on conservative pedagogic methods under which the lecture and rote learning are emphasized. Teaching about family planning comes through exhortation by professors and teachers rather than by a gradual guidance of students to accept the concept of small family norms, and then by approaching the various ways in which these norms can be achieved. Many improvements in these areas will be most difficult. However, medical school faculty participation in regional teacher training facilities, such as the one found in Pahlevi University in Iran, may be useful.

5. Increasing the amount of time spent on both the theoretical and practical aspects of family planning.

In countries such as Egypt, Pakistan, Iran, Turkey, and Tunisia, the government in-service training programs have far outstripped universities in terms of the stress they have placed on population and family planning work.

Part of the reluctance of universities and medical schools to emphasize population is the already crowded nature of the existing curricula. Also, it is to some extent the low importance ascribed to these topics by faculty members who have little appreciation of the problems of the poor in their own country -- and who tend in some instances themselves to retain large family norms. We find little evidence that medical schools give a proper emphasis to family planning. There are a number of exceptions among the Egyptian, Turkish, and Iranian universities. The medical director of the Moroccan Family Planning Program, Professor Agrege, is, for example, also a professor at Mohamed V University and teaches family planning. At Alexandria, Khartoum, and the Beirut University Medical School there are good family planning programs at the teaching hospitals. However, given the existence of fifty-four medical faculties in the region, what is surprising is not how much but how little family planning training and research seems to be going on. This is particularly true in nations such as Egypt,Turkey, Morocco, and Iran, with well-articulated national family planning programs.

It seems apparent, on an ad hoc basis, that every opportunity should be taken by the donor community to provide support to those already teaching family planning and to encourage new entrants into the field. This support can be provided in a number of ways and need not necessarily involve major financial investment. Two of the most obvious and most useful methods are through team training awards and fellowships, and also through the support of operational and other research projects of direct relevance to family planning.

In addition to whatever efforts might be considered in connection with medical schools for which priorities have been established, we would recommend that increasing and serious attention be paid to the development of family planning training in university level nursing schools.

As we noted previously, there has been a spectacular growth and increasing use of paramedicals and auxiliaries in the Near East. For this reason we are recommending that major donor efforts and funds in the field of family planning education be assigned to two or three of the following key institutions after suitable investigation.

EGYPT	High Institute of Nursing, Cairo University
	High Institute of Nursing, Alexandria University
IRAN	High Institute of Nursing, Teheran
	Department of Nursing Education
IRAQ	College of Nursing, University of Baghdad
LEBANON	School of Nursing, American University of Beirut

Other institutions do exist for the university level training of nurses and midwives in the Sudan (one facility), Israel, Pakistan, Jordan, and Turkey, and these too should be investigated.

Appendix

DEMOCRATIC YEMEN

Category	Admission Requirements	Number of Years of Study	Number of Students 1971/1972	Number of Graduates
Medical assistants	9 years education	3 years	46	
Dispensers	6 years education	18 months	24	
Pharmacy technicians	9 years education	3 years	32	
Laboratory assistants	8 years education	18 months	9	
Sanitarians	9 years education	3 years	11	11
Nurses	9 years education	3 years	29	27
Auxiliary nurses	6 years education	12 months	53	38
Midwives	3 years basic nursing	12 months	7	7
Auxiliary midwives	6 years education	18 months	33	14

Appendix

CYPRUS

Category	Admission Requirements	Number of Years of Study	Number of Schools	Number of Students 1971/1972	Number of Graduates 1972
Basic training	12 years general education	3 years	2	73	15
Auxiliary nursing	10 years general education	2 years	4	186	71
Basic midwifery	10 years general education	2 years	1	31	14
Postgraduate midwifery training	State Registered Nurse	1 year	1	18	12
Sanitarian	12 years general	2 years	1	26	--

Appendix

ISRAEL

Category	Admission Requirements	Number of Years of Study	Number of Schools	Number of Students	Number of Graduates
Dentists	12 years of schooling	6 years	1	221	14
Pharmacists	12 years schooling	4 years	1	108	35
Dental assistants	12 years schooling	8 months	2	40	40
Feldschers	Past experience	8 months	1	23	
Dieticians	12 years schooling	3 years	2	53	24
Nurses (basic nursing)	12 years schooling	3 years	17	1,617	321
Practical nurses		18 months		473	396
Public health nurses	registered nurses	9 months	2	52	36
Psychiatric nurses	registered nurses	1 year	1	12	10
Midwives	registered nurses	9 months	3	23	13
Laboratory technicians	12 years schooling	2 years	3	304	200
Physiotherapists	12 years schooling	3 years	2	177	79
Occupational therapists	12 years schooling	3 years	1	103	34
Sanitarians	12 years schooling	3 years	1	55	30
X-ray technicians	12 years schooling	2 years	4	100	51

Appendix

JORDAN

Category	Admission Requirements	Number of Years of Study	Number of Schools	Number of Students 1971/1972	Number of Graduates 1972
Laboratory technicians	General secondary certificate	2 years	1 public	18	18
Physiotherapists	"	2 years	1 public	8	8
Radiographers	"	2 years	1 public	13	13
X-ray technicians	"	2 years	1 public	13	13
Laboratory assistants	"	2 years	1 public		
Dental auxiliaries	"	2 years	1 public		

Appendix

LIBYA

Category	Admission Requirements	Number of Years of Study	Number of Schools	Number of Students 1971-1972	Number of Graduates 1972
Nurses	9 years general education	3 years	3 public	168	62
Auxiliary nurses	6 years	18 months	15 public	690	264

Appendix

PAKISTAN

Category	Admission Requirements	Number of Years of Study	Number of Schools	Number of Students 1971-1972	Number of Graduates 1972
Dentists	Inter Science	3 years	3	78	
Nurses	Matric	3 years	25		431
Midwives	Middle	1½ years	44		132
Lady health visitors	Matric	27 months	5		195
Dispensers	Matric	12 months			733
Health laboratory technicians	Matric	1½ years	3	110	
Physiotherapists	Inter Science	3 years	1	12	
Radiographers		6 months	1	12	
Sanitarians	Matric	9 months	1		55

Appendix

SUDAN

Category	Admission Requirements	Number of Years of Study	Number of Schools	Number of Students	Number of Graduates
Pharmacists	Secondary certificate	4 years	1	50	20
Veterinarians	Secondary certificate	6 years	1	47	42
Nurses (university trained)	Secondary education	3 years	1	44	30
Laboratory assistants	Primary certificate	2 years	1	40	40
Medical assistants	Primary certificate	2 years	8	72	62
Dental auxiliaries	Primary certificate	2 years	1	22	22
Auxiliary nurses	Primary certificate	3 years	41	500	468
Midwives	Nursing certificate and nurses training	1 year	3	116	76
Auxiliary midwives		9 months	9	305	177
Laboratory technicians	Secondary certificate	3 years	1		
X-ray technicians	Secondary certificate	3 years	1	20	17
Sanitary overseers	Primary certificate	6 months	1		

Appendix

TUNISIA

Category	Admission (earned)	Number of Years of Study	Number of Schools	Number of Students 1971/1972	Number of Graduates 1972
Pharmacists	Baccalaureat	5 years			
Nurses	5 years secondary education	2 years	3 public	316	271
Midwives	7 years secondary education	3 years	3 public	31	21
Laboratory technicians	5 years secondary education	2 years	1 public	28	23
Physio-therapists	Baccalaureat	3 years		7	7
Sanitarians	Baccalaureat	3 years	1 public		

Appendix

TURKEY

Category	Admission (earned)	Number of Years of Study	Number of Schools	Number of Students 1971/1972	Number of Graduates 1972
Dentists	Lycee	4 years	3 public	2,168	158
Pharmacists	Lycee	4 years	4 public	7,528	522
Veterinarians	Lycee	5 years	2 public	658	62
Nurses (university level)	Lycee nursing school	3-4 years	5 public	648	104
Health administrators	Lycee	4 years	1 public	139	31
Nurses	Secondary education	4 years	28 public	3,747	598
Auxiliary nurses	Primary education	3 years	29 public	1,869	573
Midwives	Primary education	4 years	5 public	837	174
Rural midwives	Primary education	3 years	29 public	3,369	1,046
Laboratory technicians	Secondary education	4 years	1 public	276	32
X-ray technicians	Secondary education	4 years	1 public	210	41
Sanitarians	Secondary education	4 years	1 public	141	29

BLANK PAGE

Chapter 9

HEALTH AND FERTILITY REGULATION

TEACHING AND RESEARCH POTENTIALS IN SOUTH AND EAST ASIA

I. INTRODUCTION

This section of the report provides a regional perspective for the country-specific sections that follow, summarizes the institutional development situation for those countries and also for those not covered in the country reports, and offers a basis for assigning priorities to institutional development needs.

Regional reviews are beset with the problems inherent in attempts to summarize information about countries that may be more different than alike; some attempts are more successful than others. It is at least arguable that the countries of Asia share little more than a common continent. This section covers South Asia, except for Pakistan and Afghanistan, Southeast Asia, and Northeast Asia. While it is administratively convenient to put these disparate areas together and call the grouping a "region," in terms of language, culture, and history there are clearly more differences than similarities, especially in comparison with Latin America and Africa.

Yet in the narrow focus of population, Asian countries have much in common and may more justifiably be considered a region. Over half the world's population -- 1,821,000,000 people -- is found in the part of Asia covered in this report. China, India, Indonesia, and Bangladesh alone have over half the population of the developing world; in all, this region has 67 percent of the population of the developing world; of the nineteen countries in the region,

thirteen (including the four most populous) have official policies to reduce population growth rate, and three officially support family planning programs for other than demographic reasons. (The remaining three have a combined population of 40 million, or a little more than 2 percent of the region.)[1] Asian countries share both the problem and an awareness of the need to cope with it.

In addition, there is substantial interest in population at the regional level, through the Population Division of the Economic Commission for Asia and the Far East (ECAFE), through the formation of such groups as the Inter-Governmental Coordinating Committee, Southeast Asia Regional Cooperation in Family and Population Planning (IGCC) and the Organization of Demographic Associates, through the two Asian Population Conferences, and through the population activities of such groups as the Asian Federation of Obstetricians and Gynecologists and the South-East Asia Ministers of Education Organization (SEAMEO).

Nine countries are covered in detail by specific country reports: Bangladesh, Burma, Indonesia, Korea, the Philippines, Sri Lanka (Ceylon), Singapore, Taiwan, and Thailand. Considerations relating to some of the countries not covered in individual reports (notably China and India) will be presented in this section. (For a variety of reasons, individual reports have not been made for every country in the region.)

II. BACKGROUND

Population interest and concern arrived early in Asia, and the need to face and solve population problems appeared early in development plans:

---

1. Except as otherwise noted, data for this section is from Dorothy Nortman, Population and Family Planning Programs: A Factbook. Reports on Population/Family Planning, The Population Council, 1973.

India's plan for 1951-56, the Republic of Korea's plan for 1962-66, and Sri Lanka's plan for 1959-68.[2] At the same time, a substantial health establishment already existed in many of these countries. In Thailand, for example, official public health efforts began in 1881 with cholera relief and smallpox vaccination. A government Department of Public Health was established in 1918. The first medical school was opened in 1889, based on Siriraj Hospital (now known as the Faculty of Medicine, Siriraj Hospital), Mahidol University, and the Rockefeller Foundation began to provide technical assistance to the medical school in 1923.[3] In China, the Rockefeller Foundation, through the China Medical Board, had already become involved in the Peking Union Medical College (begun by a London missionary society) at that time.[4] Japan left educational facilities and public health systems in Taiwan and Korea, as did the United States in the Philippines and the British in India and Burma. Graduate training in public health is available in one institution in Burma, eight in India, one in Indonesia, two in Korea, one in the Philippines, one in Thailand,[5] and one in Taiwan. Similarly, countries in the region offer postbasic or postgraduate training in nursing.[6]

The accomplishments of family planning programs in the region reflect

---

2. B. Maxwell Stamper, Population Policy in Development Planning. Reports on Population/Family Planning, Population Council, 1973.

3. Public Health in Thailand. Ministry of Public Health, 1971.

4. Mary E. Ferguson, China Medical Board and Peking Union Medical College. China Medical Board, 1970.

5. _____, World Directory of Schools of Public Health. World Health Organization, 1972.

6. _____, World Directory of Post-Basic and Post-Graduate Schools of Nursing. World Health Organization, 1965.

the official recognition of population as a factor in development and the established health structure. Including India (but not China), the region accounted for over 8 million family planning acceptors in 1972, or probably three-quarters of the acceptors recruited in official family planning programs worldwide.[7] (See Table 1 for a summary of policy, family planning programs, and other information on the countries covered in this report.)

III. COUNTRY SUMMARIES

Bangladesh

No degree-granting institutions now offer training or conduct research in family planning. One institution (the Bangladesh Institute of Postgraduate Medicine) offers advanced training (and does some research) in clinical obstetrics and gynecology. Plans exist for a UNFPA-supported program (US$655,714 from 1974-77) to provide training in integrated health and family planning to medical undergraduates in Bangladesh's eight medical schools. The 1974-75 Annual Development Plan provides for the formation of a National Institute of Preventive and Social Medicine, which may include departments in community medicine and population-family planning. UNDP assistance is being considered. Medical student demand for population curricula may be small, since most students plan clinical careers. Institutional development beyond current plans should probably be deferred until the current plans are underway and the demand is clarified. It is unlikely that more assistance than what is now contemplated could be usefully absorbed into the system.

---

7. Nortman, op.cit.; Keeny et al., East Asia Review, 1972, Studies in Family Planning, The Population Council. 1973. See also Keeny et al., East Asia Review, 1973; Studies in Family Planning, The Population Council, 1974.

Burma

No family planning is taught in Burma's three medical institutes, although there are some lectures on population growth. Postgraduate medical schools are being established to make medical education more relevant to local needs and to eliminate the need for overseas medical education. The World Health Organization is active in Burma and is providing two long-term physician consultants to the Division of Medical Education in the Ministry of Health. It appears now that the only likely acceptable source of assistance in behalf of population and family planning in Burma would be the United Nations family. No opportunities now seem to exist. At present, occasional visits and furnishing of books and published materials seem the only appropriate possible or acceptable means of assistance.

China

For a variety of reasons that need not be recited here, institutional development assistance is unlikely to be sought by China. Nevertheless, the Chinese example is going to assume increasing importance in plans for institutional development in health elsewhere in the region, even if the example is ultimately rejected or poorly understood. The western medical model, perhaps now more strongly supported by the medical establishment in the region than in the west, is increasingly under fire as inappropriate for developing countries. Considerations in institutional development will clearly have to include the possibility of working on the Chinese model.

India

India has ninety-seven medical colleges in a university system supported primarily by the central government or state governments, with a

few private institutions. Medical education is coordinated by the Indian Medical Council, which in 1958 recommended the inclusion of family planning in curricula and training in all medical colleges. A comprehensive syllabus was recommended in 1968. Substantial focus on population and family planning already exists in Indian institutions; research and training are being carried out at a number of sites. Some examples follow.

The University of Delhi -- a nationally supported university -- does work in reproductive biology, family planning (especially as related to social welfare), and clinical training. The University of Udaipur, a state university established in 1960, emphasizes family planning and training in an agricultural context -- agricultural development, nutrition, and home economics -- and includes it in the medical school curriculum. The All-India Institute of Hygiene and Public Health in Calcutta (established in 1932 with a grant from the Rockefeller Foundation) is under the Directorate General of Health Services in the Ministry of Health and Family Planning and is affiliated with Calcutta University. It offers a variety of graduate degrees, diplomas, and licenses. All students are exposed to core lectures in family planning and population, but beyond that there is little work in family planning and population.

There appears to be a substantial institutional base in public health and family planning already. Given the central government's control over foreign assistance, and the reluctance to accept foreign assistance in any case, opportunities for institutional development in India seem limited, except for special efforts like the World Bank's setting up a family planning focus in the Indian Institute of Management at Ahmedabad.

Indonesia

A substantial institutional development program has been underway for several years at the School of Public Health, University of Indonesia, supported directly by USAID and indirectly through advisory assistance from the University of Hawaii. In addition, the Rockefeller Foundation is providing a public health advisor in Surabaya, and the Ford Foundation has been providing support for the Institute of Public Health in Surabaya. This support, together with a special WHO-USAID program for training health educators abroad, suggests that the major opportunities for institutional development are already taken up and that additional needs will depend very much on program development in Indonesia, especially as the program reaches beyond Java, Bali, and Madura.

Korea

Korean universities have been involved in family planning since the beginning of the Korean national family planning program. Institutional support, explicit or implicit, has been given to the Korean Institute of Family Planning, the Yonsei University Center for Population and Family Planning, and the Urban Population Studies Center for the Medical School of Seoul National University (now the Institute of Reproductive Medicine and Population). The School of Public Health at Seoul National University is also active in research and training, with support from WHO, the Korean government, and the China Medical Board. In general, staff and interest exist in Korea. Support seems to be needed more for specific research projects or for staff development.

The Philippines

The seven medical schools in the Philippines have been interested in family planning and population since 1969 and have received modest assistance since 1972 in integrating family planning and population dynamics into their

curricula. Some carry out other programs in family planning training and research. In addition, the University of the Philippines has two programs in the Department of Obstetrics for research in such areas as reproductive biology and medicine, family planning clinics, field testing of contraceptives, and research in abortion and sterilization, with support from the Philippine government, USAID, and IPPF. Other medical schools carry out clinical programs in family planning and do some minor research. The Institute of Public Health includes family planning in its undergraduate and graduate programs, has organized and conducted training programs for different groups of family planning physicians and other workers, and is planning research in various public health aspects of family planning. Work is proceeding on integrating family planning into nursing and midwifery school curricula.

Initial interest seems high in Philippine institutions. The University of the Philippines and the Institute of Public Health are moving ahead with imaginative programs of teaching and research; judicious support of research and staff development in other institutions seems warranted; considerable support from USAID, WHO, and the Philippine government is already available.

Singapore

The Department of Social Medicine and Public Health, University of Singapore, plays a significant role in Singapore and in the Southeast Asia region. Its graduate and undergraduate teaching program have important family planning and demographic content, it is the Southeast Asia Ministers of Education Organization center for teaching family planning, and it has practical links (faculty membership) with the National Family Planning and Population Board and its Evaluation Committee, and with the Family Planning Association. It receives some project support from SEAMEO and from WHO for studies; it

receives no institutional support. Some institutional support to help develop its capacity for training people from other countries in the region seems desirable.

Sri Lanka

A major institutional development program is underway in Sri Lanka, involving strengthening of teaching of human reproduction, family planning, and population dynamics at the medical faculties of the University of Sri Lanka at Colombo and at Peradeniya. The project amounts to $450,000 over four years and includes consultants, fellowships and staff support. It is unlikely that additional activity in this area could be absorbed.

Taiwan

Although Taiwan was one of the pioneers in family planning and population policy, its universities have been relatively uninvolved, except for some research. Only one international assistance effort, supported in part by the Population Council, was directly concerned with universities; it focused on integrating family planning and population into medical school curricula, with moderate success. The leading university has just begun a special course in population and reproductive medicine, and a substantial base for medical education exists, with a growing capacity in public health training at the undergraduate and graduate levels. Some modest support is recommended for staff development and research.

Thailand

One major institutional development activity is underway in Thailand, at Mahidol University: the Institute for Population and Social Research. It has been supported by the Carolina Population Center, with funding from the

Rockefeller Foundation. The Rockefeller Foundation has also provided major support for research in human reproduction. At Chulalongkorn, there are plans to set up an institute of health research that would include an already existing WHO research program for clinical evaluation of fertility control agents and a family planning research unit (the one involved in the pioneering postpartum program at Chula). A number of provincial universities have shown interest but need some form of support.

IV. ISSUES AND PRIORITIES

How can priorities for institutional development in the region be set? What are some of the issues?

From a programmatic point of view, institutional development of academic capacity for research and training should provide trained professional, administrative, and evaluative staff for national family planning programs. It should also provide research and testing capacity for experiments in delivery systems, clinical and field testing of contraceptives, and deeper analysis of data generated by the national program or by others. In addition to the usual aims of providing trained personnel and research and evaluation capacity for a country, such development would ultimately aim at improving a country's ability to obtain data to inform "second-level" policy decisions (the decisions that come after a country has decided to reduce fertility: what kind of programs should be mounted; what methods should be offered and how; how should fertility control services be related to other health program). Some other nontrivial goals would include diffusion of understanding of population and family planning issues among physicians and other health professionals who are not directly involved in program efforts, and the creation of a constituency for population and family planning concerns.

Broadly, institutional development programs in health and family planning are aimed at curriculum change (adding reproductive biology, population dynamics, and fertility control to medical school curricula; adding courses and programs in family planning administration, epidemiology, biostatistics, demography, and health education in public health departments and schools), and research. Support alon, these lines can range from the relatively minor -- support for a research project or staff training -- to major undertakings encompassing expatriate advisors, local and foreign fellowships, staff support, and general research.

Support for institutional development along desired lines can often be achieved through modest grants in support of staff development, and especially in support of research. In many cases in East and South Asia, sound, capable departments exist, already staffed by competent professionals. Support for study and research can often help develop interest in population but cannot be justified strictly on the scientific merits of the research, since by definition the institution and the researchers are inexperienced in this area. Support is justifiable, however, if it seems likely to help generate self-sustaining interest in population. Given the relatively strong institutional base in the region, this kind of institutional support seems particularly appropriate and within the scope of interest and financial capacity of the Population Council.

Substantial institutional bases in health already exist in the region, and substantial efforts are already underway or in the planning stage in population in most of the likely countries of the region, except Burma. In many countries the efforts are or will be so substantial that it is unlikely that any further efforts could or should be undertaken (as long as present efforts are

continued) -- Sri Lanka and Korea seem to fit this case. In others, while the leading institution is developing, the country is so large, and the potential demand so great that institutional development support should include as one of its goals the development of capacity in the leading institution to assist development of population/family planning capacity in other institutions in the country. Indonesia and the Philippines are the best examples. The issue then becomes one of balancing the gain in support of national efforts from additional institutional capacity against the opportunity cost. Strong arguments could be made that in both countries institutional development efforts should focus on the leading institutions, helping them to spin off staff and other help to the other institutions, as opportunities and needs develop.

In all, and in the context of current programs and plans, a useful overall strategy for the region would be to focus on specific institutional needs with judiciously applied specifically aimed assistance for research and staff development, at a relatively modest level.

It may be, however, that the strong traditional focus of this institutional development review has missed the mark entirely. The delivery of health services in the region is based on the traditional western model, and that model is supported by a deeply entrenched establishment. That model has not been successful (except in Taiwan and Singapore) in delivering services to the bulk of the population. It is then at least questionable whether a family planning program operating through that system can expect to be any more successful. Serious consideration should be given to supporting the development -- in a country or within a region of a country -- of an institution that would attempt, through research and training, to develop a suitable adaptation of the Chinese health delivery system, including family planning services, as an alternative to the conventional systems.

Table 1

EAST AND SOUTH ASIA
SUMMARY OF POPULATION AND FAMILY PLANNING STATUS

	Population Policy	Population (Millions)	Official Family Planning Program (Year)[a]	1972 Acceptors (Thousands)
Bangladesh	A (1971)	72	(1965)	Unknown
Burma	C	28	None	-
Cambodia	C	7	None	-
China	A (1962)	800	(1956)[b]	Unknown
Hong Kong	B (1956)	4.1	(1956)	30.3
India	A (1952)	562	(1952)[i]	5,615
Indonesia	A (1968)	126	(1969)	1,039.1
Korea (North)	C	15	None	-
Korea (South)	A (1961)	33.5	(1963)	630 [c]
Laos	A (1972)	3.1	(1972)[d]	Unknown
Malaysia	A (1966)	10.1	(1966)	56.4
Nepal	A (1966)	11	(1965)	Unknown
Philippines	A (1970)	39.1	(1968)	589.8
Singapore	A (1965)	2.2	(1966)[d]	23.9
Sri Lanka	A (1965)	13.	(1965/66)[e]	71.0
Taiwan	A (1968)	15.1	(1964)	172.6
Thailand	A (1970)	38.4	(1968)	403.8
Vietnam (North)	B (1962)	22.1	Unknown	Unknown
Vietnam (South)	B (1971)	19.5	(1971)[d]	32

a/ From Country Profiles for the country in question, unless otherwise noted.
b/ Pi-Chao Chen, "China's Birth Control Action Programme, 1956-1964." Population Studies, Vol. XXIV, No.2 (July 1970).
c/ Includes 299,000 average monthly pill and condom acceptors.
d/ Keeny, et al., op. cit.
e/ O.E.R. Abhayaratne and C.H.S. Jayewardene, Family Planning in Ceylon (Colombo, 1968).
i/ Data from Ortman, op. cit., unless otherwise noted.

A - Offic[ial] policy to reduce the population growth rate.
B - Official support of family planning for other than demographic reasons.
C - No policy or family planning support.

BLANK PAGE

Chapter 10

HEALTH AND FERTILITY REGULATION

TEACHING AND RESEARCH POTENTIALS IN LATIN AMERICA

I. SCOPE OF THE REPORT

Over 300 million people inhabit the developing portions of the Western Hemisphere exclusive of the Unites States of America and Canada. The official language of the larger countries, and most of the population, is either Spanish or Portuguese, and for convenience the region is often referred to as Latin America. There are over twenty-five developing countries or political dependencies in this region, and despite strong nationalistic tendencies, the similarity of cultural and religious background results in a greater sense of regional identity than is found in most large areas of the world.

Brazil is the largest country in the region, with over 100 million inhabitants, or one-third of the total population of the region. Another 100 million live in the next three largest countries: Mexico, Argentina, and Colombia. They are widely dispersed geographically -- in the far south and the far north and midway between the two. An additional one-sixth (50 million) of the region's population are the next four largest countries, each with 9 to 15 million each: Peru, Venezuela, Chile, and Cuba.

Five-sixths of the region's population are in the aforementioned eight countries. Three of these, Argentina, Chile, and Cuba, are omitted from this report because of their relatively low fertility levels and because of our limited access to information in each due to the local political conditions at the time site visits were scheduled.

The remaining sixth of the region's population is in about twenty countries or dependencies with a combined total of approximately 50 million inhabitants. Among these smaller countries, there are country reports for Ecuador and Bolivia in the Andean region, Haiti and the Dominican Republic on the Island of Hispañola in the Caribbean, and three others from Central America. There is also a separate country report for Jamaica, the largest English-speaking island population in the Caribbean.

Natural groupings within the region emerge from a combination of geographic, climatic, and language similarities. These are shown in the table below with the population of each group at its head; country populations are in parentheses after each country name. Those for which country reports have been prepared are marked with asterisks.

Four subregional groupings of 40 million or more, and a few smaller ones, emerge from this table. The most important groups are: Brazil (distinguished by its size, language, and aspiration to become a world power); the Andean countries (with a combined population of 62 million, and further distinguished by having indigenous Indian populations); Mexico and Central America (75 million); and the southern cone of South America (41 million and uniquely low growth rates for the region).

SUBREGIONAL GROUPINGS IN LATIN AMERICA

WITH POPULATION ESTIMATES AND COUNTRY REPORT STATUS*

Region	Language		
	Portuguese or French	Spanish	Other
Tropical South America	108#	62	1
	*Brazil (108)	*Bolivia (5)	Surinam (<1 or .4)
		*Colombia (23)	Guyana (1)
		*Ecuador (7)	
		*Peru (15)	
		*Venezuela (11)	
Temperate South America (Southern Cone)	---	41	---
		Argentina (24)	
		Chile (10)	
		Paraguay (3)	
		Uruguay (3)	
Middle America	---	75	---
		*Costa Rica (2)	
		*El Salvador (4)	
		Guatemala (6)	
		Honduras (3)	
		*Mexico (54)	
		Nicaragua (2)	
		*Panama (2)	
Caribbean	5	14	4
	*Haiti (5)	Cuba (9)	Bahamas (<1)
		*Dominican Republic (4)	Barbados (<1)
			*Jamaica (2)
			Trinidad and Tobago (1)

#Population of region for mid-1973 (in millions) is underlined at top of each group; population of country (in millions) is in parentheses.

* Indicates that individual country report was prepared.

II. DEMOGRAPHIC OVERVIEW

Latin America has the highest rate of population growth, 2.8 percent per year, of any region of comparable size in the world. Its present population of over 300 million (308 million in 1973) will increase by well over one-third in ten years and will double in twenty-five years if the present rate persists. Six countries, including Mexico and Colombia, have growth rates of 3.4 percent per year or more (Table I).

Fertility is typically high throughout the region, with crude annual rates of 40 or more per 1,000 population for most countries, and 38 for Brazil, the largest country. Fertility rates are lowest (20 to 26) at the southern tip of the continent (Argentina, Chile, and Uruguay) and in several small English-speaking islands in the Caribbean. The only other exception to high fertility levels is Cuba, whose rate has declined to 27 over the last decade (Table I).

Mortality reductions have been widespread throughout the region during the last twenty-five years, and today only a few small countries have annual rates above the 7 to 11 range. Reductions of ten points in crude annual mortality were common over this period, and international assistance in public health is credited with a significant role in these declines (Table I).

Information on demographic trends is more available now than even five years ago, but there are still problems regarding the availability of data and their level of analysis, especially within countries. The role of the United Nations Demographic Center (CELADE) has been extremely important in training, in stimulating and supervising analyses of demographic data, and in encouraging the countries to conduct censuses and special surveys. It is now generally agreed that there are more countries in the region with modest trends downward in national growth rates than the reverse, although there are many that have exhibited little or no discernible trends in recent years.

Within-country trends, such as changes in growth rates for urban and rural areas separately, shifts in age-specific fertility, and changes in underemployment rates for different characteristics of the labor force are not as readily available as aggregate data. Without these data local recognition of the significance of demographic factors, and interest in their interrelationship with social and economic development, is hindered.

Fertility differentials and other comparative demographic data from a single point in time are more generally available than trends, for the simple reason that the collection of these data has been encouraged in special surveys over the past ten years, and comparable information was seldom obtained in the past. (These surveys now can provide baseline data for measuring changes over time if comparable surveys are again carried out.)

The distribution of population is of great concern to policy makers and professionals in the region, to a much greater extent than in the developed world. This concern stems from the very rapid expansion of the major cities with rings of squatter settlements and the obvious demands for urban services, employment, schools, and health care. Compared with the rest of the world, the region has a low average population density and a relative absence of population in the interior of continental Latin America. (The ability of the interior to sustain a large population is in dispute.) Government policy to redirect the migration from the rural areas to settle in the small cities or to colonize the interior have met with only limited success despite the importance attributed to this.

Urban growth has far surpassed the rates of growth of rural areas, and the eight largest countries of the region are now all at least half urban, and two of them, Argentina and Chile, are about three-fourths urban (Table I).

III. POPULATION POLICY OVERVIEW

Population policy in the Latin American region tends to have a different emphasis and substantive mix than in developed Western countries. In the first place, countries may officially approve or fund family planning for health reasons alone while having no population policy or a pronatalist policy. (Brazil is an example of the latter.)

It also should be noted that rapid growth per se is not everywhere a primary concern, nor is it necessarily seen as a barrier to development. On the contrary, many Latin American economists are persuaded that population growth stimulates development by increasing demand and permitting industrial specialization. Even those who view rapid growth and the resulting population pressures as problems in themselves and as impediments to social and economic development are not all for lowering fertility. Some favor colonization of the sparsely-settled interior by redirecting migratory flows away from the major cities.

On one point there is general agreement in the region: population policy should not exist independent of policies and programs for general social and economic development. Hence, population policy generally encompasses more fields than growth and fertility. It may be intimately intertwined with policies about literacy and the general levels of education; unemployment, underemployment, and the need to generate more and better jobs; urban growth and the provision of urban services (for example, potable water and waste disposal), public transportation, housing, electricity, and so on; and health services, including family planning. A few indicators of the state of material progress and social development are presented in Tables II and III. Although considerably more favorable than many African or Asian data, the Latin American data show wide disparities and provoke great dissatisfaction in the region. Unfortunately, measures of the distributions

of income or wealth are not available, for they would show other key sources of concern.

Some public support and government policy that are in favor of family planning are based exclusively on health grounds. They are intended to reduce child and maternal morbidity and mortality and to reduce clandestine abortion. They also serve to reduce the number of abandoned children and contribute to the integrity and stability of the family. These actions in favor of family planning are not taken in ignorance of their possible effects on aggregate fertility, but this consideration need not explicitly enter into the decision-making and public justifications of the actions.

Catholic hegemony and the papal position on contraceptive methods have affected the types of services that are permitted in the region. Oral contraceptives and the IUD's are generally available in urban areas throughout the region with the exception of Peru, although their introduction and widespread adoption was slowed by the Catholic position. Male and female sterilization remain generally unacceptable and the procedures are not known to be in widespread use (except in Puerto Rico, where about one-third of the women in childbearing ages have had the operation). However, there is professional interest in the surgical procedures, and the techniques and the necessary equipment can be found in many leading medical schools.

Abortion is illegal but prevalent in the region, generally as an unsafe procedure of the clandestine abortionists who provide services for the less privileged classes; safe, efficient abortions tend to be available only for the well-to-do through private physicians and clinics, except in Argentina and Uruguay, where the low birth rates are attributed to the procedure.

Most public health officials feel that pills, IUD's, and conventional contraceptives are adequate although not ideal, but that there is need to

extend the motivation for their use. It is believed that acceptance and continued use of contraception is lower in unstable family situations, which are prevalent in the region, and that many traditional family attitudes seriously limit birth planning. For this reason, family life and sex education have been given great importance in Latin America, where it is an integral part of many family planning programs. Rather than being a substitute for family planning that some critics ascribe to it, sex education is seen as an essential beyond-family planning component of a successful program to lower fertility norms, or to help persons who typically "take what comes" set alternate norms.

Notwithstanding all of the above, there has been a clearly discernible trend in the adoption of official population policies. In 1968 President Balaguer signed the World Leaders' Statement and created the National Council of Population and the Family of the Dominican Republic, with an interministerial governing board. President Carlos Lleras also signed the World Leaders' Statement in 1968, but adoption of a national policy in Colombia was delayed until 1970. In 1973, Mexico adopted a policy to reduce growth and is rapidly establishing a country-wide family planning program through the health services of the Health Ministry and the Social Security Institute with vertical organization in some instances. A National Population Council also was established with interest in all aspects of population in Mexico.

More recently, in Bucharest, Brazil announced its new policy of governmental support for family planning, which is in marked contrast to its previous position. The federal government and the various public health agencies that serve the Brazilian population are to provide information and services in order that the less privileged population in the country will have the same opportunity to space pregnancies and limit family size as the more affluent, who have had

access to these services through the private medical sector. (Although the secondary effect of national family planning services may be to reduce aggregate fertility, the Brazilian government retains its desire and expectation to become a world power with a population of at least 200 million. It also should be noted that Brazil expects to absorb much of the new population through settlement of the currently sparsely-settled interior portions of the continent.)

The current policy positions are summarized in the table below and compared with the position that they held six years earlier in 1968, the year the pope visited the region for the first time and the year of the Encyclical Humanae Vitae. Despite the strength added by these events to the traditional ways, there have been major shifts in policy of three of the four largest countries, Brazil, Colombia, and Mexico.

POPULATION POLICY POSITION, 1974 and 1968

Country	Policy* 1974	1968	Country	Policy* 1974	1968
Eastern South America			Middle America		
Brazil	B	C	Costa Rica	B	B
Surinam	C	C	El Salvador	B	C
Guyana	C	C	Guatemala	B	B
			Honduras	B	B
Andean South America			Mexico	A	C
Bolivia	B	C	Nicaragua	B	B
Colombia	A	C	Panama	B	B
Ecuador	B	C			
Peru	C	C	Caribbean		
Venezuela	B	B	Bahamas	n.a	n.a.
			Barbados	A	B
Southern Cone			Cuba	B	B
Argentina	C	C	Dominican Republic	A	A
Chile	B	B	Haiti	B	C
Paraguay	B	C	Jamaica	A	A
Uruguay	C	C	Tobago and Trinidad	A	A

* A = Policy to reduce fertility and growth; typically includes family planning
B = Policy to provide family planning without goal to reduce growth
C = Neither of the above
n.a.= not ascertained

Within the countries of the region, two interesting sequences of events have appeared: the adoption of official support for family planning has followed the development of a broad network of services, and the teaching of demography and population matter has followed research. This should not obscure the fact that population policy in the region has been hampered by the limited number of professionals trained and experienced in demography, and especially in the interrelationship between demographic factors and social and economic development. Planning institutes draw heavily on the disciplines of sociology, economics, and urban planning, but there are few advanced training programs of this type in the universities of the region. The medical and public health schools have reasonably well-developed teaching of medical demography, biology of reproduction, and contraceptive methods. Their counterparts in the social sciences have found it difficult to add population studies to schools of economics and sociology. These faculties are highly nationalistic, often radical, and generally suspicious of international assistance, and this may be the reason demographic teaching has often followed population research, and not vice versa. It seems that local analysis and publication of hard national data legitimize faculty and student interest in the subject matter, and permit broader and deeper exploration of the impact and importance of demographic factors and their interface with development.

IV. HEALTH AND FAMILY PLANNING SERVICES OVERVIEW

Health care typically is guaranteed by the constitutions of the Latin American countries. Health services are physician-oriented and are reasonably satisfactory in urban areas, and typically deficient except for special programs such as malaria control in rural areas. Males use health services far less than women, and the availability of health services varies by class. For the most part, the upper class uses private care. Most social security systems cover

the urban salaried workers and provide health care for them and their families. There is in addition a large majority of the population who depend on public care through federal or local health facilities or charitable religious hospitals. But since coverage is typically incomplete, empirical parteras (midwives) and curanderos (healers) also practice in many countries.

The organization of family planning services is characterized as vertical when the staff is contracted exclusively for family planning and supervised in an administrative system dedicated exclusively to this end. Integrated family planning services are those provided as part of regular health care, usually MCH or obstetrical care, and in this arrangement family planning competes with curative medicine for the time of the health professionals. Many health care professionals and international agencies have identified with one or the other of these divergent approaches. IPPF and PAHO were the primary proponents of the vertical and integrated approaches, respectively. Both approaches have merit, but the differences in their appeal seem to be rooted in perceptions of the availability of sufficient health care personnel relative to the demand for services, especially whether the attending physicians in the integrated approach will have time for preventive care (family planning) after attending to emergencies and other curative care. These differences are exacerbated by the scarcity of physician time and the skewed distribution of physicians toward the major urban areas.

There are few differences of opinion regarding the ideal organization of health services, for it is generally agreed that family planning should be a regular part of health care. This has occurred in the hospital postpartum program, where contraceptive education, counselling, and services are integrated with the other services associated with hospitalization for delivery or abortion repair. The crucial question is whether family planning services should

be provided exclusively in either an integraded setting or vertically. If, as we feel, the answer is "no" to both, then we can confront the more fruitful question of the efficience of one or the other approach in specific settings, and the appropriate allocation of resources between them.

More recently, a new factor has been gaining prominence, and it is likely to erase the significance of these opposite approaches. It is the delegation of selected health care and family planning functions to paramedical personnel. The possibility of relying on the more easily trained and lower paid paramedical staff, many of whom are willing and motivated to live and work in the smaller cities and rural areas, should redirect attention to seeking the best arrangement for their use.

If it becomes possible to rely heavily on paramedical staff for family planning so that the absence or scarcity of personnel is overcome, it will put the consideration of specialization and exclusive dedication to family planning in a new context. Decisions should then be made on the basis of the cost efficiency and productivity of alternative approaches, both of which can be expected to vary with the density of the target population and the state of development of the health care services into which family planning might be integrated. It is entirely possible, as seems to be developing in the Dominican Republic, that an initial and temporary development of vertical family planning services using nurse auxiliaries in rural and semi-rural areas will be a useful mechanism for the subsequent extension of basic MCH services in areas where they are now absent or deficient. (The best example of the reverse order of development is the simplified medicine program which was planned and implemented for rural Venezuela, to which family planning will now be added.)

The medical societies in the region may accept the greater delegation of functions to paramedics, but they are unlikely to do so without a system of

supervision by, and referral of problem cases to, a physician. This may be handled directly or through intermediary health professionals, such as graduate or intermediate nurses. The concept of extended medical supervision has arisen in which the physician is at the apex of a small pyramid of health personnel with paramedics as the base, and progressively more qualified personnel in the intermediate positions. A feature of this arrangement is that the physician is accessible according to need, but not necessarily near all the paramedics under his supervision.

Finally, the distribution of contraceptives through community-based systems and commercial channels requires mention. Several systems are being tested in various places, and their final success will depend on the development and acceptance of some low-cost system of medical supervision, or the removal of the oral pill from the restricted drug list, or both.

Health Indicators

There is little research and evaluation of health care delivery, except for that designed to improve family planning. But the experience with family planning will in time benefit a broader range of health services as staff are recruited and gain experience, and as administrators become accustomed to such data. Hopefully, the academic institutions will incorporate training in this field for a portion of their students, but to date few schools do this.

Ratings of the availability of family planning services by urban and rural areas of countries are presented below. These ratings are based on public and private programs, but do not reflect the availability of contraceptives through commercial channels, because market prices are too high for routine use by most of the population.

Calorie and protein intake of the median countries averages 2,330

calories and 59 grams of protein daily. The average caloric intake for all countries ranges from 1,760 (Bolivia) to 3,160 (Argentina); protein intake ranges from 45 grams daily (El Salvador) to 105 (Argentina). (Table III.)

AVAILABILITY OF FAMILY PLANNING SERVICES

BY URBAN AND RURAL AREAS

Country	Family Planning Services* Urban	Rural	Country	Family Planning Services* Urban	Rural
Eastern South America			Middle America		
Brazil	B	C	Costa Rica	A	B
Surinam	C	C	El Salvador	B	C
Guyana	C	C	Guatemala	B	C
			Honduras	B	C
Andean South America			Mexico	B	C
Bolivia	B	C	Nicaragua	B	C
Colombia	A	B	Panama	A	B
Ecuador	B	C			
Peru	C	C	Caribbean		
Venezuela	A	B	Bahamas	n.a.	n.a.
			Barbados	A	A
Southern Cone			Cuba	A	A
Argentina	C	C	Dominican Republic	A	C
Chile	A	B	Haiti	B	C
Paraguay	B	C	Jamaica	A	B
Uruguay	C	C	Trinidad and Tobago	A	B

* A= Widespread availability
B= Limited availability
C= Little or no availability
n.a.= not ascertained

Several health indicators also are presented in Table III at the end of this report.

Life expectance at birth for males in the region is in the range of 50 to 59 years for nine countries whose population is over 2 million inhabitants, below that for four such countries, and in the 60's for eight countries (Table III).

Infant mortality rates are not known for seven countries, including Brazil, and are about 70 or more in five, including Mexico, Colombia, and Chile (Table III).

Population per physician is about 2,000 or more in most countries. The most notable exceptions are Argentina (504), Venezuela (1,057), and Cuba (1,153). (Table III.)

V. ID STRATEGY

The purpose of institutional development is to develop a permanent local capacity to support a self-sustaining program in population. Effective and sustained national action requires: (a) policy commitment, (b) program planning to translate the policy goals into actionable tasks, (c) effective implementation of the plan, and (d) a favorable response on the part of the target population. All but the smallest countries wish to have a capacity to train the professional and managerial personnel required for these various functions, and the middle and larger-sized countries desire to be largely self-sufficient in this. These goals are highly expedient politically. It is the task of institutional development to improve upon, or, where necessary, create this capacity locally. Typically, this will involve adding population disciplines to related programs of study in the health and social science fields of universities. Occasionally, as with CELADE and the Regional Population Center in Bogotá, it will be useful to assist the creation of an entirely new organization.

One could define institutional development to include institutions that carry out action programs, such as the voluntary family planning associations. For the purposes of this report, the concept has been largely limited to institutions of research and training, because the universities are the primary source of the highly trained professionals which are required to staff

the functions enumerated above: policy analysts, programmers, managers and investigator-evaluators.

Institutional development for health and family planning will involve primarily the medical schools and schools of public health, and to a lesser extent, schools of nursing and nurse auxiliaries. To this list may be added the specialized schools of public administration, although this will depend on the extent to which health administration is effectively taught in local schools of public health. For research and evaluation, it may be necessary to seek collaboration from the social science faculties for training in data gathering and statistical analysis.

One other field should be considered in Latin America. The goal of reduced fertility is being sought through the development of effective and widespread family planning services and contraceptive distribution, for it is generally believed that there are important segments of the population in Latin America that risk unwanted pregnancies. While this is undoubtedly correct, many professionals and policymakers in the region feel that the control of unwanted pregnancies alone will not be sufficient to bring aggregate fertility down to socially desirable levels, and that additional steps must be taken to encourage individuals and families to reconsider the timing, spacing, and number of children that they want to have. Information and education rather than exhortation is the approach favored by the governments and the church, and careful research and evaluation is needed to develop a factually-based position on whether such action is called for and, if so, to achieve the insight and understanding concerning family and individual motivations to make an effective program. The institutional capacity for this is limited, and if a major effort would be appropriate in this area, it will have to be shared between the health and social sciences and include educational planners and curriculum experts as well.

VI. RECORD TO DATE

The record to date on institutional development in Latin America is reasonably good, although not all efforts have been successful. It should be noted that although there have been numerous serious efforts of institutional development over the last decade, this area never has had the attention and high priority that has characterized direct assistance for family planning.

This report treats primarily of teaching and research institutions, but mention also should be made of the successful development of private family planning organizations which are now active in almost all countries of the region. These represent a substantial achievement in the development of local institutions committed to population activities, and some of them have been able to raise significant amounts of local funding. Many of them have been at the forefront of expanding family planning services and in pioneering new approaches in their countries.

The table below presents, in summary form, a representative list of research and teaching institutions that have been assisted to develop active programs in population. They are listed by type of institution and external source of assistance. USAID funding has been a significant factor in permitting PAHO, the Population Council, and United States universities to be active in this field, although not all of the assistance provided by these institutions has had its origin with USAID.

The course of the development of population activities in almost all of the Latin American institutions has been very uneven. Progress and setbacks or slowdowns in development have typically alternated, sometimes because of the sensitive nature of population activities, but frequently because of severe dislocations within the larger host institution. There clearly are risks of failure in attempting to assist institutional development, but such outstanding

successes as CELADE and the College of Mexico, the nine medical schools and ASCOFAME in Colombia, the Schools of Public Health in São Paulo and at Antioquia, and the Panamerican Federation of Medical Schools and the Regional Population Center in Bogotá amply demonstrate that it can be a rewarding undertaking.

SELECTED INSTITUTIONAL DEVELOPMENT ACTIVITIES IN POPULATION

BY SOURCE OF ASSISTANCE AND TYPE OF INSTITUTION

Source of Assistance	Schools of Public Health	Medical Schools and Assistance	Other
PAHO	University of São Paulo University of Chile		
Ford Foundation		FEPAFEM ASCOFAME	IESA, Caracas INCAE, Managua CCRP, Bogotá CESPO, San José
Rockefeller	Univ. of Cali Univ. of Bahia UPCH, Lima		
Population Council	U. of Antioquia U. of Buenos Aires	FEPAFEM ASCOFAME ASPEFAM Nine in Colombia UPCH, Lima	CCRP CISM/OTEMO, Lima

---

There also have been significant interactions between the health and DARSS institutions in Latin America. For example, CELADE contributed substantially to the training courses in health and demography for physicians at the University of Chile and in other courses organized by PAFAMS. Medical schools, medical school associations, and health departments have provided employment to

technicians and professionals produced by CELADE, and two of the young faculty trained for Los Andes University are employed in family planning evaluation or programming. Physicians and health institutions in Chile and Colombia, for example, also have made very significant contributions to the development of national population policies, attesting again to the interrelatedness of disciplines as practical responses develop to deal with national problems.

A review of institutional development efforts that have not been successful also is instructive. For example, difficulties were encountered early in efforts to develop demography in the national universities in Lima and Bogotá, and little was achieved in either of them. These failures were not limited to population alone, however, as parallel efforts to upgrade related areas of the social sciences ended the same way. This reflects the great difficulties inherent in attempting to rationalize curriculum and administration in highly politicized large public universities. The decline in the commitment to demography at the private university of Los Andes in Bogotá is another failure, but one that has some offsetting benefits. Demography declined more completely than the host discipline, economics, but both had their roots in the greater politicalization of social science students as compared to the other faculties of the universities, and hard decisions brought on by financial stringency at the university. The fate of the demography project was then sealed with the tragic and untimely death of the key figure in its development and implementation, Alvaro López Toro. On the positive side, most of the young staff who were trained and given their early experience in the Los Andes project remain active in population work with other organizations and have not been lost to the field.

It seems inconceivable in looking back over the last decade that the changed commitments in Latin America to population would have developed so rapidly without the emergency of several centers of excellence in health and

DARSS. Even though they may not have reached levels comparable to the best institutions in the world, these centers have excellent staff and a capacity to weather adversity. It is essential that such centers exist and expand if the region is to improve its policies and implementation regarding population matters.

CELADE and ASCOFAME and the Regional Center in Bogota are interesting examples of new institutions that fulfilled a need unmet by existing ones. Although CELADE began with a rather narrow definition of demography, it widened its interests greatly, and it and the Regional Center now effectively mix disciplines, having physicians, sociologists, and economists involved in research and evaluation, population studies, and policy development. ASCOFAME added population to its traditional health fields in the mid-1960's and initiated interdisciplinary projects by adding DARSS specialists to its staff.

CESPO in Costa Rica was another new institutional creation to provide a mechanism for coordination among quite different types of institutions interested in or committed to work in population fields.

ICARP (the International Committee for Applied Research in Population), which was brought into being by the Population Council in Asia and expanded to Latin America, began as an informal arrangement for work in this area, and is moving toward a more formal structure. It may someday take on a totally independent institutional life in each region.

What can be learned from past experiences are not simple generalizations that institutional development is possible with private institutions but not with public ones (for actual experience contradicts this), but that very careful diagnosis of the local situation, including a careful assessment of the local professionals who would be responsible for guiding the activities, can result in extremely attractive and significant projects for the region.

The institutional development, however, is not a mechanism for furthering goals or objectives which are not shared locally. It seems to be an efficient and effective mechanism for developing and strengthening local efforts whose time has come, and which are promoted by at least some energetic and dedicated local professionals.

Outstanding personal leadership has been a significant ingredient in the success of each major project, and the contribution that each has made has been increased by having had an institutional base from which to operate. Several leaders have evidenced a deep understanding and perceptiveness concerning the problems confronting their societies, and have responded with priorities, programs, and mechanisms for carrying out their ideas. They have benefited from collegial interchanges with counterparts from the international agencies, and these agencies have provided essential financial resources at crucial times and have continued them for sufficiently long periods for their activities to pay off. Today there are many younger persons in the region who can be expected to achieve similar successes over the next five to ten years if they are assisted to develop a reasonably well-protected professional environment, and have access to the additional resources that they will need at crucial times.

VII. RECOMMENDATIONS

The recommendations that follow are organized along a number of different dimensions. First there are recommendations regarding countries, taking into account the regional subgroups, country size and influence, growth rates, and the current state of program development and institutional strengths. Next, recommendations are presented according to the substantive matter involved, the fields of specialization that should be well developed in the region. Following these, recommendations are presented according to the types of institutions

that should be assisted. Finally, recommendations are made for specific institutional development projects that should be sought in the near future on the basis of the general recommendations and the local potential for development that was discovered or confirmed in the country surveys.

Countries and Regional Subgroups

Brazil, by its size and growth rate and its capacity to undertake serious activities in population, is without a doubt a country that deserves very high priority. By contrast, the group of countries in the southern cone have a low priority, although as will be described later, some assistance could be justified if the available resources for population programs exceed the absorptive capacity of the highest priority activities. The Caribbean area rates an in between priority, based on the intense population pressure on local resources and the resulting legal and illegal outmigration to the United States; this is offset somewhat by the low overall population size and the limited potential for institutional development.

Central America and Mexico and the belt of Andean countries complete the regional groupings. Both have high priorities, but the rating does not extend to each country that comprises each group. Institutions in Mexico are seen as regional resources in Central American countries, so that assistance to Mexico can serve the broader group. Nevertheless, some assistance should be provided selectively to a few Central American institutions both for the value of such activities in the home country and as a pilot and demonstration project for the rest of the group.

No one country dominates the Andean group; Colombia, Venezuela, and Peru, in that order, are the priority countries. As in the Central American group, selected activities in other countries might also appropriately be assisted, but the main effort should be in the three larger countries of the group.

Venezuela today and increasingly Ecuador and Bolivia have unusual revenues from oil and gas to invest in development, and the volume of external assistance to them probably should reflect this, but these favorable revenue situations should not preclude externally-financed seed efforts and technical assistance if they will accelerate the development of strong institutional involvements in population activities.

Substantive Areas

Policy analysis, program planning, program implementation, and the evaluation of program effectiveness are functions typically carried out by different persons in official programs in Latin America. The population fields to which these functions relate in the health context (as opposed to DARSS) are: family planning, including the various administrative arrangements and professional or paraprofessional staff which are actually or potentially involved in the delivery of these services; family life and sex education; and perhaps other still to be determined "beyond family planning" activities in the region.

Priority institutional development should be given to the family planning area, although efforts should be given to better understand the importance of family life and sex education; the latter falls into the research and demonstration area and would only be elevated to a priority level for institutional development if the findings strongly support the importance of this approach.

Within family planning, it is necessary to distinguish different approaches to the delivery of services because local development needs differ. No one wants to eliminate the physician from the delivery and supervision of family planning services, and it is therefore essential that the curriculum of medical schools and the clinical training in affiliated hospitals include the appropriate family planning content. Physicians are community and often po-

litical leaders, and it is appropriate that the medical school curriculum also includes medical demography, in which population problems are discussed. The medical schools should be given priority where they are deficient, and the full range of fertility regulation methods should be understood and discussed, although not necessarily practiced because of the ethical and legal prohibitions that may be in force locally.

Although the physician is not to be replaced, he is to be supplemented with paramedical staff who can be trained to carry out important delegated functions in family planning (though not necessarily exclusively these). Although ad hoc training may be called for, it will not be efficient to depend entirely on this, and the long process must be started to update curriculum in the schools that prepare the paramedical personnel, in the faculties that prepare teachers, and in the medical and public health schools that prepare supervisors, and who must accede to and promote the delegation of functions if policy in this area is to be effectively carried out.

Program planning and health administration have not been widely taught at advanced levels, and some specialized training in public health schools or appropriate departments of medical schools or in specialized graduate schools of administration (IESA/Caracas, INCAE/Nicaragua, for example) should be assisted. This will not involve massive enrollments, but the required levels of administrative sophistication mark this as an area for development for a limited audience.

Finally, the area of program research and evaluation has been neglected regarding health programs, although it is being assisted in the family planning area, initially because donor agencies insist upon at least crude measures of cost effectiveness, but also because of a genuine local interest to improve management and programming. There is a scarcity of local personnel skilled in these areas and almost no institutional capacity to produce the necessary pro-

fessionals. Fortunately, the skills overlap with those in the DARSS area, and some collaboration and mutual reinforcement can be foreseen. It is a substantive area of priority whose long-term contribution in increased program efficiency probably will repay the required investments, but since delayed gratification is not attractive to politicians who must survive in the short run, this too will require external assistance to get seriously underway.

Types of Institutions

The types of institutions to be developed follow readily from the priorities established for the substantive areas: medical and public health schools, to a lesser extent schools of nursing and nurse auxiliaries, and in special cases schools of administration. To those may be added the Regional Center in Bogota and possibly other special creations, depending on their relative efficiency. An overlap of institutional development with ad hoc training programs may be justifiable -- the ad hoc activities to fill an urgent present need and institutional development activities to build more slowly a self-sustaining local capacity.

Specific Recommendations by Country

A brief overview of the areas in need of assistance follows by country. A more detailed identification of the relative strengths and prospects in specific institutions is included in the Country Reports which follow separately. The following table provides a compact resume of the country rating of availability of rural and urban family planning services, the fertility control methods employed, and population policy position. Country population growth rates and population size may be found in Table I.

COUNTRY RATINGS: AVAILABILITY OF FAMILY PLANNING SERVICES IN URBAN AND RURAL AREAS, METHODS OF FERTILITY CONTROL, AND POPULATION POLICY POSITION

Availability of family planning in areas:		Methods of Fertility Control Index[b]		
Urban[a]	Rural[a]	Few Methods	Intermediate	Many Methods
High	High			Barbados (A)[c] Cuba (B)
High	Medium		Venezuela (B)[c] Panama (B)	Colombia (A) Chile (B) Costa Rica (B) Jamaica (A) Trinidad and Tobago (A)
High	Low		Dominican Republic (A)	
Medium	Low	Haiti (B)[c]	Brazil (B) Bolivia (B) Ecuador (B) Paraguay (B) El Salvador (B) Guatemala (B) Honduras (B) Nicaragua (B) Mexico (A)	
Low	Low	Surinam (C) Guyana (C) Peru (C) Argentina (C) Uruguay (C)		

a: High = widespread availability; Medium = limited availability; low = little or no availability

b: Based on ratings of six methods, separately for urban and rural areas

c: Letters in parentheses represent ratings of population policy position from: A = Reduce fertility; B = Family planning; C = Neither

Source: Dorothy Nortman, "Population and Family Planning Programs: A Factbook," Reports on Population/Family Planning, The Population Council, 1973.

The five countries singled out for top priority consideration -- Brazil, Colombia, Mexico, Peru, and Venezuela -- do not cluster on any of these variables, for they are at different stages in the evolution, from opposition and inaction regarding population to full support and programs. The lessons from previous assistance activities may be applied now, and further progress in policy and programs should be expected.

Brazil: Since there are many strong medical schools in Brazil, it is not necessary to build up the areas of related activities in any major way, but initiation of the full range of activities relating to population and health should be assisted, and special contact should be maintained with the medical school association, ABEM, to monitor its possible interest in promoting new MCH/FP norms, in providing assistance in curriculum revision, and in undertaking necessary research, evaluation or demonstration projects in population that may be considered appropriate in Brazil. Research and evaluation of family planning is poorly developed and should also be assigned priority for assistance.

The health services of the social security system probably do not require institutional development assistance, but do warrant special attention to detect possible assistance needs. The formal adoption and implementation of family planning as a routine part of its services would have a salutory impact on the medical schools.

Colombia: The medical schools and their association, ASCOFAME, have developed population activities to a greater extent than any other Latin American country. With current assistance from the Population Council, they are engaged in a new pilot project for the delegation of functions which involves physicians and auxiliaries. While this is largely confined to urban and small urban areas, success will undoubtedly lead to efforts to adapt the concepts to

small towns and rural areas. Research and evaluation also is reasonably well developed, although not yet adequate in the Ministry of Health. Modest institutional development investments are still needed, primarily to maintain the progress already made, but especially through the Regional Population Center (CCRP), to make experience and technical resources available for the benefit of neighboring countries. Whether it be from sources of support for "training" or for "institutional development" is of little practical concern to the center. CCRP remains largely dependent on international donors since it does not yet receive sufficient financial support locally.

The primary thrust of institutional development within Colombia should now be in the DARSS areas. Both the National Planning Institute and the National Science Council are eager to promote this and to be involved with external assistance to lessen the possibility of local resistance or interference based on political or other nontechnical grounds.

Mexico: The Ministry of Health and the main social security system, IMSS, have clear policies in favor of family planning as a result of the high level political decision in 1973 to reduce aggregate fertility, but the medical schools had not then modified their curriculum and many still lag in this regard. The principle of delegation of medical functions, including family planning, to paramedical personnel is not widely embraced, and both research and demonstration projects and institutional development covering the broad spectrum of population activities should be assisted in the major health training institutions.

Research and evaluation, though not as well developed as in Colombia, for example, is formally recognized and supported locally. Additional requests for strengthening local capacity in this area also should be seriously considered, whether from academic or operating institutions.

Peru: Despite the government's continuing reluctance to permit family planning in the public health facilities, the graduate DARSS activity at Catholic University is the most advanced activity of this type related to sociology and anthropology in the region. Some important progress has also been made in the medical schools, but it is not yet complete. Many professors have initiated the teaching of medical demography and family planning in their schools, and when the government becomes more permissive about family planning action programs, it will be but a short step to add demonstration activities which would permit expansion to full service programs.

In this limited sense, it is appropriate to support institutional development activities in medical schools now and to anticipate a subsequent stage of expansion into demonstration and expanded training projects. The Peruvian Medical School Association has been providing assistance in teaching and research to the member schools. The Cayetano Heredia University Medical School, in a project that is continuing, has developed a curriculum and published the teaching manual for the postgraduate training of physicians in the physiology of reproduction and integrated maternal care, including family planning. Many physicians graduated in the years before these subjects were taught; to date these courses have been presented only two times a year for professors and leading physicians; but at a propitious moment they could be expanded by recruiting many of the previous graduates to organize additional courses in their areas. Hence, donor organizations need do little more in these areas than continue existing activities and remain watchful and ready to expand assistance when the government signals its readiness to receive it.

Venezuela: The government is now openly committed to family planning, but the medical schools and School of Public Health have not yet updated their curriculum to support this activity. President Pérez has pledged that the uni-

versities will not lack resources, so that whatever assistance might be helpful to accelerate the incorporation of population subjects in the curriculum need not require a long drain on donor resources. Venezuelan institutions more than any others in the region can easily become financially self-sufficient and will require only professional and technical collaboration. It is not unreasonable to expect that Venezuela will also soon join the ranks of donor countries and will provide technical assistance as well.

The DARSS area also is on the brink of development following years of resistance or outright opposition to population matters, and investments in this field are likely to be successful on the basis of only modest external inputs.

Table I

LATIN AMERICA: BASIC DEMOGRAPHIC DATA

Country	Mid-1973 Population (millions)[1]	Rate of Growth (Percent)[2]	1985 Projected Population[3]	Crude Annual Rates Births[3]	Deaths[3]	Percent Urban[2]
Eastern South America						
Brazil	107.8	2.8	142.6	38	10	56
Guyana	0.8	n.a.	1.1	36	8	35
Surinam	0.4	3.4	0.6	41	7	38
Andean South America						
Bolivia	5.3	2.5	6.8	44	19	34
Colombia	23.2	3.4	35.6	45	11	60
Ecuador	6.7	3.4	10.1	45	11	39
Peru	14.9	3.1	21.6	42	11	51
Venezuela	11.3	3.0	17.4	41	8	68
Southern Cone						
Argentina	24.3	1.2	29.6	22	9	80
Chile	10.2	2.0	13.6	26	9	73
Paraguay	2.7	3.4	4.1	45	11	39
Uruguay	3.0	1.3	3.4	23	9	78
Middle America						
Costa Rica	1.9	2.6	3.2	34	7	36
El Salvador	3.9	3.5	5.9	42	10	41
Guatemala	5.5	2.8	7.9	43	17	31
Honduras	2.7	3.2	4.6	49	17	26
Mexico	54.3	3.4	84.4	43	10	56
Nicaragua	2.0	3.0	3.3	46	17	42
Panama	1.6	3.0	2.5	37	9	47
Caribbean						
Bahamas	0.2	2.3	0.2	28	6	72
Barbados	0.2	1.3	0.3	22	9	44
Cuba	8.9	2.4	11.0	27	8	56
Dominican Republic	4.4	3.4	7.3	49	15	38
Haiti	5.2	2.4	7.9	44	20	18
Jamaica	2.0	2.7	2.6	35	7	38
Trinidad and Tobago	1.1	1.7	1.3	24	7	50

1. United Nations, Population and Vital Statistics Report, Series A, Vol. XXVI, No. 3, p.12.

2. United Nations, Population and Vital Statistics Report, Series A, Vol. XXVI, No. 1, pp. 44-53.

3. Population Reference Bureau, 1973 World Population Data Sheet

Table II

LATIN AMERICA: SELECTED SOCIOECONOMIC DATA

Country	Percent Literate[1] M	Percent Literate[1] F	Percent of dwellings: Three or More Persons Per Room[1]	Percent of dwellings: Inside Piped Water[1]	Dependency Ratio[1]	Per Capita GNP ($US)[2]
Eastern South America						
Brazil	70	64	3	--	1.11	$ 420
Guyana	--	--	--	--	1.27	370
Surinam	84	83	19	22	1.40	530
Andean South America						
Bolivia	42	23	--	--	1.12	180
Colombia	75	71	--	--	1.34	340
Ecuador	72	63	49	12	1.38	290
Peru	74	48	43	15	1.26	450
Venezuela	68	58	21	--	1.34	980
Southern Cone						
Argentina	92	91	15	--	0.81	1,160
Chile	89	87	17	60	1.07	720
Paraguay	81	69	53	6	1.36	260
Uruguay	90	91	--	--	0.77	820
Middle America						
Costa Rica	85	84	13	59	1.41	560
El Salvador	54	44	63	26	1.34	300
Guatemala	44	32	--	11	1.28	360
Honduras	49	41	45	12	1.35	280
Mexico	78	70	57	39	1.37	670
Nicaragua	50	49	52	12	1.44	430
Panama	79	78	44	46	1.21	730
Caribbean						
Bahamas	90	89	7	31	1.16	2,300
Barbados	--	--	--	--	1.05	570
Cuba	76*	80*	--	--	1.02	530
Dominican Republic	67	62	--	8	1.38	350
Haiti	13#	8#	--	--	1.16	110
Jamaica	79	85	31	21	1.43	670
Trinidad and Tobago	--	--	24	32	1.14	860

*1953 data
#1950 data

1. United Nations, Population and Vital Statistics Report, Series A, Vol. XXVI, No. 1, pp. 44-53.

2. Population Reference Bureau, 1973 World Population Data Sheet

Table III

LATIN AMERICA: SELECTED HEALTH INDICATORS

Country	Life Expectancy at Birth[1] M	F	Infant Mortality Rate[1]	Population Per Physician[2]	Daily Per Capita: Calory Intake[3]	Protein (grams)[3]
Eastern South America						
Brazil	58	63	--	2,028	2,820	67
Guyana	63	66	40	4,328	2,080	46
Surinam	63	66	30	2,370	2,330	58
Andean South America						
Bolivia	44	46	--	2,301	1,760	46
Colombia	57	60	76	2,161	2,140	50
Ecuador	56	59	91	2,928	1,970	46
Peru	57	60	--	1,802	2,260	55
Venezuela	62	65	49	1,057	2,430	60
Southern Cone						
Argentina	64	71	58	504	3,160	105
Chile	58	64	88	2,015	2,560	66
Paraguay	57	61	--	2,336	2,540	65
Uruguay	66	72	43	941	2,740	91
Middle America						
Costa Rica	64	67	67	2,663	2,370	62
El Salvador	53	57	53	3,950	1,850	45
Guatemala	50	52	88	3,617	2,020	50
Honduras	47	51	--	3,449	2,200	55
Mexico	61	64	69	1,284	2,620	66
Nicaragua	49	51	--	2,060	2,330	63
Panama	62	65	41	1,421	2,370	59
Caribbean						
Bahamas	--	--	37	1,202	--	--
Barbados	69	72	42	1,714	2,380	73
Cuba	65	59	36	1,153	2,500	63
Dominican Republic	51	54	64	2,044	2,060	50
Haiti	43	46	--	13,213	1,930	47
Jamaica	67	70	39	2,817	2,280	59
Trinidad and Tobago	65	69	40	2,313	2,360	64

1. Population Reference Bureau, 1973 World Population Data Sheet.

2. United Nations Statistical Yearbook, 1973, Table 197, p. 720

3. United Nations Statistical Yearbook, 1972, Table 162, p. 524-530.