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A SURVEY OF INSTITUTIONAL DEVELOPMENT  
ACTIVITIES AND NEEDS IN SOUTH AND EAST ASIA  
COUNTRY REPORTS

THE POPULATION COUNCIL

JANUARY 1975

SURVEY OF INSTITUTIONAL DEVELOPMENT

ACTIVITIES AND NEEDS

South and East Asia

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PAKISTAN

Case Studies and Findings

... population crisis has surfaced prominently in  
... level of government planning and decision making, in the  
... process, and among the educated elite, including academics.  
... ambitions, ranging from a newly  
... approach at field and clerical levels.  
... a National Committee, chaired by the prime minister, a Popula-  
... established at the Bangladesh Institute of Develop-  
... a Coordinating Population Division to be located in "an  
... appropriate Ministry," and population research to be supported within and  
... outside the government's Family Planning Action Program. The first Five-  
... Year Plan's manifestation of real government interest and support for popu-  
... lation research and training has predictably led to new enthusiasms on the  
... part of both donor agencies and host institutions.

Supporting the official declaration of a fresh and energetic action,  
... research, and training policy are some encouraging facts at the levels where  
... these activities would actually be effected. Many younger academics express  
... a sincere desire to contribute to nation building, and large amounts of  
... foreign assistance appear to be available; in a number of institutions, a few  
... of the middle-aged foreign-trained, research minded faculty have reached  
... quite senior positions and are providing active leadership and "push."  
... The University Grants Commission is considering radical reforms to insti-  
... tutionalize the performance and rewarding of social science research. Some  
... population training and research centers exist and are desirous and capable

of future expansion.

As always in Bangladesh, however, the list of obstacles to fresh initiatives is formidable. Further, many of these, since they are systemic and quasi-to-fully political in nature, are all but impervious to positive efforts of well-meaning outsiders. Major barriers to institutional development include:

1. The "balloon squeeze" syndrome -- a concentration of governmental priority and attendant funding, including benefit potential, threatens to drain off the best manpower from other institutions. With a paucity of competent research scholars, such concentration could prove fatal to several fragile starts on useful population research, particularly outside the capital (Dacca).

2. Systemic within universities:

- a. Increasingly heavy teaching loads caused by an influx of new students, who are, for the most part, poorly trained and motivated and spend increasing time on political activities more likely to insure job attainment, rather than on education.

- b. Poor training of most staff in research techniques, accompanied by either indifference or outright opposition to research on the part of many senior staff.

- c. Lack of financial or career incentives for research.

- d. Lack of adequate facilities, including hardware, texts, foreign journals and monographs.

- e. Poor tradition of interdepartmental and interinstitutional research collaboration.

- f. Defection of faculty abroad.

2. Frustration from all of the above and isolation from professional colleagues who have received quality Ph.D. level training in the western world.

3. Systemic within government and society:

a. Government concern with programmatic, family planning, operational research.

b. Because of extremely high and rising cost of living, fixed government and university salaries and benefits are becoming inadequate.

c. An inhospitable political atmosphere endangers those who concentrate on research rather than on political activities to ensure their survival.

Table 1 presents some selected demographic, social, and economic characteristics of Bangladesh:

Population (in millions)	
1972 estimate	72
1985 projection	108
Rate per 1,000 population (1971)	
Births	45-50
Deaths	15-20
Natural increase	25-30
Percent distribution of population by age	
All ages	100
Under 15 years	47
15-64	50
65 years and over	3
(Year)	(1970)
Dependency ratio	99

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\*Source: Dorothy Nortman, "Population and Family Planning Programs: A Fact book." Reports on Population/Family Planning, Population Council, 1973.

Females aged 15-4 (1972 estimate in millions)	
Total	20
Married	15
Density (1972 population/sq. km)	510
Percent urban of total population	
1970	5
1985 (projected)	u
Percent literate	
Male	15.8
Female	4.2
(Year)	(1973)
(Age group)	(u)
Percent of eligible age group in school	
(Primary school age group)	u
Male	u
Female	u
(Secondary school age group)	u
Male	u
Female	u
(Year)	(u)
Population (in thousands)	
Per physician	5
Per nurse	7
Per midwife	7
Per hospital bed	u
(Year)	(1972)
Gross domestic product (GDP)	
Per capita in US\$ (1970 or 1971)	u
Percent derived from agriculture (recent year)	u
Annual percent increase in real GDP	
Total	u
Per capita	u
(Years)	(u)
Per capita food production, 1969-71 average index (1959-61 = 100)	u

II. INSTITUTIONAL DATA

INSTITUTIONAL CONSIDERATIONS

It is difficult to go beyond a superficial statement of the current needs in population science and research. More trained manpower will be required, with training that includes concentration on research methodology. A resident adviser or visiting scholar would be useful, if not essential, in the short run, to help with the design and implementation of specific high priority research projects. With regard to training, no one should be sent for a Ph.D. abroad with only local training as background. The preferred approach is to identify the best local M.A. and M.Sc. graduates, send them abroad for a year or two to receive training in research methodology, return them for two or three years of guided research experience, and then let the best or best group pursue master's or doctoral work. Final work for dissertations would especially be carried out on Bangladeshi problems with data obtained in Bangladesh; an ideal pattern would be dissertation level refinement of some aspect of research carried out during the two to three years between overseas stints.

With regard to foreign advisors or visiting scholars, the title and time period of their visits are less important than their quality and willingness to work on problems of high local priority, and their ability and desire to help conceptualize, formulate, and guide local research.

The state of social science research and training in Bangladesh is quite poor. Demographic training is all but nonexistent, as is anthropology as a discipline. Sociology, especially at Chittagong, is somewhat stronger; economics, especially at Dacca, is probably in the best overall shape, given the stimulation available from well-trained colleagues at BIDS and the Planning Commission. Geography is quite strong at Dacca, and political science is

reasonably so at Dacca and Chittagong. New professional societies and organizations may assist further development.

Various institutes may help energize existing effort and ability, but there is no alternative to the longer run institutionalized development, particularly in regard to population work. Any slackening of support could lead to the absence of meaningful social science research for the foreseeable future. Since we are speaking of four or five universities where graduate level social sciences exist, and a handful of semi-autonomous nonreproducing institutes or academies where research has been or currently is being carried out, the threat is particularly grave. It is all the more so in a land of 69 to 75 million people, more than 80 percent of whom are illiterate, increasing by perhaps more than 3 percent annually, food-deficient, land-scarce, war-weary, and impoverished in practically every way imaginable.

What follows is a summary of social science teaching and research activities in population, with comments on prospects for further development in governmental, semi-autonomous, and university level institutions, with or without external assistance. A briefer section deals with the current situation and prospects in the field of public health/family planning.

#### SOCIAL SCIENCE TEACHING AND RESEARCH IN POPULATION

##### A. Government

The Planning Commission. The first Five-Year Plan calls for the establishment of a "Population Division" in "an appropriate Ministry." For reasons involving continuing disagreement on the desirability of the government's recent change to an "integrated" approach to family planning, no decision has been made on the division's locus. A substantial part of the problem arises from confusion as to the division's functions: the plan

speaks generally of "coordination and evaluation," and the Ministry of Health and Family Planning contends it could handle this better than the Planning Commission. These mandate the present health, family planning and social welfare section of the Planning Commission (PC), which is trained in the population field, and a broader view of the division's desired functions, which should include assisting the government with its population policies and maintaining a center for population information for development planning.

The controversy will continue to resolve, but the division may still have to learn how to do it and when it does, existing "population section" staff will require assistance to develop short and long range plans. At least one skilled social or preferably economic demographer should be recruited to provide top technical leadership and, with the presently trained and demography trained in Bangladesh, top local M.A. and Ph.D. holders. Graduates will need some combination of advanced foreign and local on-the-job training.

Training, Research, Evaluation and Communications Center (TRECC).

The TRECC's status and mandate have been so insecure that at present it hardly knows whom to report to within the Ministry of Health and Family Planning. Despite years of Berkeley Ford Foundation staff training and advisory investments, the TRECC has carried out no research at all since 1969-70 (previously it had completed forty-one separate projects). At half-strength professionally, the center has lost many of its better people (notably to Chittagong University) and continues to do so; remaining staff speak openly of plans or hopes to leave. In the social sciences there is no demographer and only one Dacca-trained deputy director statistician.

Since there appears to be no other institutional base for the range of program-oriented research, evaluation and training inputs required for the Ministry's projected advances, the University of Michigan's School of Public Health may assist in revivifying the TRECC. Michigan's assistance could include a long-term advisor, possibly a demographer, and would concentrate initially on launching a few strong field and program action-oriented projects in the areas of evaluation and/or communications. Staff training would be centered as much as possible in Bangladesh, whether or not under the aegis of a formal foreign university advanced degree program.

The Bureau of Statistics. A national household survey is nearing completion and the Population Growth Survey (PGS) has been reactivated. The fully operative IBM 360 computer is well-maintained and run by trained personnel and has a fair amount (200 out of 300 hours) of biddable unused capacity open to researchers from BIDS and ISRT. The PGS and household survey data should be available to researchers by the end of 1974, at about the time more complete census data are released. At present, there do not appear to be urgent training, equipment or research needs unmet at the Bureau.

Census Office. The 1974 census seems to be a well supervised, relatively efficient operation. With approximately 100,000 trained enumerators, who were mostly teachers paid T100 each (about US\$12.50 -- 1961 enumerators were all volunteers), the 1974 census completed field operations in mid-March. The schedules used are single paged (both sides) written in Bengali and containing some twenty-seven items or sub-items. A 5 percent sample of schedules will be used for subsequent cross tabulations. Preliminary data from enumerators' tally sheets were to have been available by mid-1974 and included information on age groups, sex, literacy, and employment status. The Census Office has applied for participation in the World Fertility Survey

and, if accepted, plans operations for February 1975.

Integrated Rural Development Program (IRDP). Under the direction of a well-qualified rural sociologist, formerly chairman of the Department of Rural Sociology at Dhaka Agricultural University, the IRDP is carrying out a major socio-economic survey of 75 village blocks. The basic purpose of the survey is to provide a baseline for program evaluation, a sampling frame for research, a list of village-level case studies included, and a pool of expertise in village surveys. The survey is the first of a series of about seventy village surveys being planned over the next few years available to interested researchers and should become a very important source in the population field.

Population Commission. The government has accorded second highest priority to the population plan, and its newly reformulated family planning program is clearly intended to lead the way. The government's research role will center on the performance of action-oriented studies aimed at improving its family planning/health service functions. The Planning Commission should eventually develop some limited social science research capacity of its own to supplement IRECC's efforts in this area. Government's most important role lies in the "coordination" of ex-government population research, primarily through selective funding and some mechanisms (other than the blue ribbon, prime minister-led, National Population Council) for the exchange of views on research priorities and findings with academic researchers.

B. Autonomous or Semi-Autonomous Institutes (Non-University Based or Connected)

Bangladesh Academy for Rural Development (BARD). BARD continues to enjoy a unique degree of contact with various action programs at the interface between population, rural development, and the cooperative movement in general. Presently, however, population research is the responsibility of a single staff

member, Dacca University trained, whose most relevant prior research experience was with Dr. John Stoeckel in the late 1960's. Other population staff are abroad for training, one at MSU (social psychology), the other at Beirut (demography). There are also plans to recruit a Bangalee social psychologist and a demographer. A female doctor/nutritionist will join BARD's staff in the near future.

The single population researcher currently on hand is completing some research (a continuation of the pre-liberation annual Kotwali Thana family planning evaluation study) and plans a pill acceptance/continuation study next. He has some ideas for further research, but training demands, the lack of qualified guidance, and a dearth of colleagues with similar professional training will prove a severe handicap. The academy is not, however, asking Ford Foundation to provide a demographic advisor under its prospective grant renewal from that organization; the director admits that population is a high priority which other concerns, such as the government's Integrated Rural Development Program (IRDP), somehow seem to have overshadowed. They would welcome, however, advisory and training assistance.

Given BARD's field contact, excellent library, and superior facilities, other Bangalee researchers should make efforts to conduct either their own or collaborative research from this base. BARD's own population research capacity requires strengthening through staff recruitment and training (with the in-Bangladesh concentration suggested in this paper's introduction) combined with expert advisory input. Conceivably, the right kind of demographic advisor even in Dacca could spin off to help aim the BARD group in the right research direction. Research efforts should probably remain field and family planning oriented, evaluative in the sense of trying to uncover social/cultural blockages to program effectiveness, while also gauging the program's actual demographic impact.

Cholera Laboratory. The Cholera Laboratory continues to maintain regular data (now collected monthly or biweekly, rather than weekly as before) on nearly 250,000 persons in nearby rural Matlab Bazar. Data include information on births, deaths, marriages, marriage dissolutions, migration, and other basic socioeconomic information. In addition to the Matlab field team, which collects this data, a highly mobile "special studies" section of the epidemiology division has a good deal of experience in doing diverse (not exclusively medical) survey work. This unit, presently suffering from relative inactivity, could and probably should expand as a service group for individuals and institutions wanting to do social science oriented population research. A Bangalee M.A. in population dynamics (Johns Hopkins) returned to the laboratory in the summer of 1974, and the British will possibly provide a demographic advisor to work with this man.

The Cholera Laboratory is not a candidate for institutional development in the conventional sense. It should, however, play a prominent role in population research by collaborating with other institutions whose primary mandate is training and/or research. The Bangalee or foreign advisor posted at the laboratory to perform population research should expand efforts to "sell" the lab's data and survey potential by working with colleagues elsewhere in carrying out field research and imaginative, useful studies with data already accumulated.

Bangladesh Institute of Development Studies (BIDS). As set forth in the Plan, a Population Studies Center has been established initially within BIDS, although there is serious talk of ultimately developing the center as a separate institution doing multidisciplinary population training and research. The present population staff consists of two demographers (one United States trained Ph.D. and one Australian trained) and five Dacca economics M.A.'s (two research associates and three essentially research assistants of a lower status). Since the center is

slated to be the national leader in social science population research, in addition to helping and coordinating population scholars elsewhere, it badly needs Bangalee leadership to set research priorities, to actually see a few projects from design through completion, and to generally represent the new unit on a basis of equality (according to seniority, experience, and acknowledged ability) with a number of very well-trained economist colleagues who presently dominate the BIDS at every top level. There does not appear to be anyone with the necessary qualifications in the BIDS at the present.

In addition to an able Bangalee director for the center, other specific needs include:

1. A good foreign or local "visiting scholar" to teach an eight to ten week summer course in demographic techniques for the center staff as well as relevant personnel from the Planning Commission and ISRT. (A longer term person may also be required to do research and help advance the center's research program; this may or may not be the same person teaching the short summer course.)
2. Recruitment of Bangalees overseas who are undergoing or have completed demographic training.
3. Some M.A. level training of "research" members of the new group of local M.A.'s, in the United States or elsewhere, followed immediately by Ph.D. study for the better candidates or their return to BIDS for intermediate on-the-job research experience and further screening.
4. Books, equipment, materials.

The new director is impatient to motivate the center in research and has worked to transform the institute into the present Bangladesh Institute of Development Studies -- a multidisciplinary center along Sussex IDS or Harvard

lines (it was formerly the Bangladesh Institute of Development Economics). The BIDS is strong, responding well to the PC's needs without showing signs of slavishness, as yet, and is an obvious place to develop demographic strength, given its continuing close ties to the PC, its existing staff, and past experience in producing good research. With its strong economics orientation, however, it might best specialize in economic demography, if an alternative locus (such as Chittagong) were found to complement this emphasis through social demographic research. It is probable that the BIDS will continue to receive Ford Foundation support for the PSC and its own general operations. The Population Council may provide professional assistance and some financial support for fellowships to the center.

The dangers of moving too fast in too many directions are obvious and include the possibility of no real movement at all. At the same time, if the new BIDS concept gains true support, and BIDS begins serious recruitment in all fields of social science, other institutions -- such as universities, which need good staff for both research and teaching -- could be fatally stripped of their presently meager supply of talent.

C. Autonomous and Semi-Autonomous Institutes (University Based or Connected)

Dacca University

Institute of Business Administration (IBA). Developed by Indiana University's school of Business Administration under a series of Ford Foundation grants, the IBA is probably the best management training institution in Bangladesh. It is interested in training government family planning workers in management skills and accordingly submitted a workshop proposal to USAID and the Ministry of Health and Family Planning some nine months ago. The IBA neither desires nor requires assistance to develop its special interest in

population, but it is a logical base for management training and research needs of the newly launched family planning programs.

Institute of Educational Research (IER). The IER, primarily through its director, has recently become interested in population education and has submitted two relevant research proposals for approval by the PC. The first, to be funded by the Ford Foundation, will develop and test population materials for courses in classes VI through VIII in forty schools in two thanas (covering roughly 6,000 students). The other, involving non-formal radio education at the primary level, will emphasize population education for Bangladesh's 150,000 primary school teachers. Continuing interest by the IER might require short-term visits by outside authorities in this relatively new field, and possible funding of selective attendance at focused regional or ex-regional seminars or workshops; but it is doubtful that advanced training or long-term advisory assistance would be a high priority, especially given the relative abundance of Ph.D.'s among the IER's large staff. (Population education materials developed elsewhere, however, would be helpful to those at IER who are new to this area.)

Institute for Statistical Training and Research (ISRT). Past population research efforts are presently stymied by a shortage of qualified staff, excessive teaching loads, lack of funds, and an apparent unwillingness of trained expatriate Bangalees to return, particularly because of local politics. Johns Hopkins University recently worked out a joint arrangement with the ISRT, the Family Planning Board's postpartum program, and the Post-Graduate Medical Institute to develop a training/research program, concentrating on biostatistics and field evaluations of pill acceptance and use. One foreign resident advisor with demographic training has been provided to work with all these institutions in this area, and foreign graduate level training of at least ISRT staff is likely

to be involved in the longer run, but not initially due to budgetary limitations at Hopkins.

Institute of Social Welfare (ISW). The ISW has the usual general problems of excessive teaching loads, decreasing quality of incoming student preparation, and little time for real research, which is thus far confined mostly to practical field work with students. A couple of staff members, including the co-author of the recent UNROD report, have an interest in population, and the director has been asked to participate in the International Association of Schools of Social Work's (IASSW) plan to involve a few Asian schools of social work in a pilot program of "population planning" by enriching the existing curriculum with population content. No real prospects for institutional development in population teaching or research, however, are apparent at this time.

The University Grants Commission (UGC). The UGC, a relatively recent creation in Bangladesh, is trying to expand the influence it at least nominally exercises as the screening body for university budgets prior to final government approval. The purpose of its newly formed projects committee is to invite high priority research projects from university staff for evaluation and then finance the most worthwhile (using government or other external funding). It appears to feel somewhat threatened by the possible advent of a National Social Science Research Council, putatively Ford Foundation funded and conceptualized from slightly different points of view in four recent Foundation consultants' reports. The UGC sees the projects committee as complementing the SSRC's work for university researchers in the area of research efforts except those of universities. The real SSRC, if it emerges, is likely to take a more holistic view of its mandate to stimulate social science research in priority areas, particularly in universities.

Another relevant UGC plan is to encourage universities to introduce a two-year post-master's course, heavily research-oriented, leading to an M.Phil. degree as a prerequisite for new lecturers' appointments. Another idea is to make universities enforce a "no annual research, no annual salary increment" rule for all faculty, and a "select out" regulation for those not producing research over any consecutive three-year period. Laudable as these ideas are, it is likely that the universities' resistance to their implementation will be vigorous. The wholly nonthreatening SSRC seems a far safer means of gaining wide acceptance.

Finally, the UGC is entertaining a "Center for Advanced Study and Research" plan, whereby:

1. Dacca University would specialize in the social sciences (with the Department of Economics as the nucleus), physical sciences, and public administration;
2. Chittagong University would have a Center for Population and related matters (with the Departments of Sociology and Political Science at the center);
3. Rajshahi University would form an Institute of Bangladesh Studies, possibly focusing on key problems of the Rajshahi region; and
4. Jahangirnagar University would develop a Rural Studies Institute, concentrating on economic and social problems of villages, cooperatives, and agricultural development.

Progress on the development of those institutions having population research as a significant mandate is reported below.

Bangladesh Population Association (BPA). Initiated by a senior Dacca University Department of Economics faculty member (who is also the university's

sole demographer), the BPA came into existence in December 1973 as an interdisciplinary, countrywide professional association intending to "promote the study of and research in population in Bangladesh." It plans to hold annual meetings and special seminars, fund population research by its members, and publish a journal. For the latter three outside funding will be required.

D. University Departments

Chittagong University

The Department of Sociology is a relatively young department and has developed a strong interest in population research and instruction under the leadership of its head, a demography Ph.D. from Cornell. Former director of the TRECC in Dacca, he is currently on leave of absence as a visiting Population Council staff associate in New York. In his absence, leadership of the department lies with two ex-TRECC Berkeley MPH faculty who, despite their lack of adequate training in demographic research methodology, are carrying out several projects begun by the absent head and have others planned. Several staff members currently are abroad studying for advanced degrees; the balance of mostly Dacca M.A.'s in sociology with little or no experience in research. One full paper on population policy (half demography and population dynamics and half policy) is taught by the department.

With the support of the Political Science Department and to some extent the Department of Economics, the head of sociology has prepared an ambitious project to establish a Population Studies Center (PSC) at the university, involving a considerable increase in staff (with advanced training overseas to be provided by foreign assistance), books, and equipment. The Ford Foundation has shown interest in supporting a modified version of this proposal, but there is skepticism toward launching a major project in the absence of the head. If

the government of Bangladesh accepts the principle of establishing another, but sociology oriented, center for population studies outside BIDS in Chittagong, there is no reason why local or overseas training of staff could not begin in the head's absence, as well as some fresh research initiatives, possibly under the guidance of an outside advisor making periodic short-term visits to Chittagong.

The idea of a center is strongly supported within the University of Chittagong. The absent head is one of only four or five demographers in the country (two are at BIDS, one at Dacca University, and others are working or studying abroad), and the Department of Sociology on net has the best potential (and greatest enthusiasm) in the country to develop population studies from the social demographic side. Given its strong orientation toward rural and urban field studies, the department's emergence as a formal or de facto center should nicely complement the BIDS' efforts in Dacca.

In the Department of Economics a few younger staff, with little or no demographic training, have shown enthusiastic willingness to participate in the center concept through research and added population emphasis in some of their courses.

The same situation apparently exists in the Department of Statistics as in Economics. In addition, Statistics has a few desk calculators (Sociology does not) and teaches one full course in demography at the B.A./B.Sc. honors level.

The head of the Department of Political Science, who is also dean of Social Sciences, is strongly supportive of the center concept and is providing local "push" for it during the sociology head's absence. He has a large and well-trained staff and teaches one course (formerly taught by the sociology

head) -- Politics and Social Change -- with some population content.

Dacca University

In the Department of Political Science the usual problem of a "student flood" has all but deluged serious research efforts here, but some younger faculty members are interested in doing a rural/urban migration project in addition to the present elite study of recently elected MP's. Of principal note is the past work and continuing interest of the department's able head, a Ph.D. from Harvard, in the status of women.

Courses in demography at the Department of Statistics have been suspended at the B.A. and M.Sc. level and are now given by a mathematical statistician (self-taught in demography) due to the departure of one of the country's ablest demographers to a Washington IBRD post. The department's relatively new head suffers from over 30 percent staff vacancies and would like to recruit (or train from existing staff) at least two demographers. The department has done no research over the last several years (hence the creation of the Institute for Statistical Research and Training), and he feels that it should move back into the research area he sees as practically abandoned by the ISRT. Thus far he has had no success in trying to attract qualified expatriate Bangalees. He would welcome the help of a foreign advisor or a spin-off from someone located elsewhere (as at the ISRT) and foreign training fellowships.

Department of Geography. Several courses are taught at the B.A./B.Sc. and M.A./M.Sc. levels in population geography, population and settlement patterns, and economic demography. (In all of this, as in past research, there is a strong -- perhaps unique within Bangladesh -- concentration on problems of population distribution.) Past research includes work on man/land relationships, several population monographs, and some unpublished M.A./M.Sc. student theses

on various aspects of population: age and sex distribution by district, the relationship between agriculture and population, and so on. A late 1973 seminar on the census of Bangladesh resulted in a Bangladesh Geographical Society publication of selected seminar papers. The department plans to publish the complete proceedings if a publisher can be found at moderate cost. Future research plans include a Population Atlas of Bangladesh project and "Bangladesh in Maps," an atlas depicting Bangladesh statistics with text and sixteen to seventeen maps on selected aspects of population. (This latter project is funded by the university and is targeted for completion by the end of 1974.) A regular journal, the Oriental Geographer, has been published by the Bangladesh Geographical Society, Department of Geography, since 1960.

This is a strong department, well-led and comparatively well-staffed, with solid if somewhat overlooked background and interest in population studies and research. At least one fairly senior staff member has a major interest in population geography and wants to obtain a United States Ph.D. in this area. (He has been accepted at Boston but needs funding.) There is still a good job market for department graduates. Minimal inputs from outside -- books and journals, some cartographic equipment, plus one or two training fellowships -- would definitely help solidify a valuable base of distribution-oriented population research and training.

The population strength of the Department of Economics lies in one United States trained Ph.D. demographer and three junior faculty who have studied some demography under him. At present no demography is taught at the B.A. level, and one paper out of four is taught at the M.A. level. (A proposed curriculum reform would add another full paper for M.A.'s and a half-year course for B.A.'s.) Fourteen members of the total faculty are currently overseas for

advanced training, including two in demography. Some demographic research has been produced in the past by the head, and he has submitted a proposal for Ford/Rockefeller policy studies funding. Students are used to collect field data for training purposes, and the head hopes to eventually produce some publishable work out of these exercises. With the return of the two demographers currently studying overseas, there may be a renaissance of demographic teaching and research, but at the moment training seems to be the major emphasis. If the proposed curriculum reforms are approved, this department would be the logical locus for the training of economic demographers. It is already, except for the Department of Geography, although demographic instruction is far too thin.

The chairman of the department has a strong interest in developing a multidisciplinary Institute of Social Science Research at Dacca. There is some suggestion that he would like the BIDS to serve in this role as it develops and to become associated with the university both formally and physically (he would offer it building space). It appears unlikely at present that such an arrangement will take place.

Bureau of Economic Research (BER). The Departments of Economics and Commerce and the IBA channel all research projects for funding through the BER, which receives its funding (currently about \$25,000 annually, normally \$12,500) from the university. The BER has no permanent research staff itself, but does provide some secretarial services to researchers. Its managing committee assesses \$1,200-ceiling proposals submitted.

The reportedly marginal interest in research on the part of the Department of Sociology's senior staff makes prospects bleak for population work at present and in the foreseeable future.

Jahangirnagar University

This new university began classes in January 1971, shortly before the Pakistani crackdown. Its campus is only partially completed and lies some twenty miles north of Dacca, or about an hour's drive, thereby necessitating resident faculty and students. Because of the scarcity of materials, construction of residences has been all but discontinued for some time, resulting in restricted student intake.

There are two social science departments, geography and economics, plus statistics located in the science faculty. Population research and training is currently limited to one man with a 1971 Durham Ph.D. in population geography. (His dissertation topic was "Patterns of Population Structure and Growth in Bangladesh.") There are plans to teach population geography after M.A. and M.Sc. studies begin in 1974, but only one course is now taught at the B.A. and B.Sc. honors level. A rural studies center has also been set up by the Geography Department, and a socioeconomic survey of local villages is underway as a research start, heavily dependent on geography department inputs. Serious interest and capacity in population studies are clearly at a very early stage, and serious thought toward institutional development prospects in the population area is probably premature, although interest in establishing a "population cell" or "center" was expressed by the department's chairman.

Mymensingh Agricultural University

Currently there are no faculty members trained in population, and no full papers are taught in demography. Rural sociology has been heavily dominated by agricultural economics, which primarily emphasizes farm management, production economics, marketing, and so forth. Present staffing patterns are likely to thwart any efforts to encourage the development of population studies at

this institution.

Rajshahi University

One major interdisciplinary study on population in the Rajshahi region is presently planned, initiated primarily by the Departments of Social Work and Economics. It will survey family planning attitudes and practices among university faculty and students as well as people from the surrounding villages. Subsequently, an action program, to be run by the university's medical faculty, will be designed and implemented in an attempt to respond to attitudes identified by the preceding survey.

The various individual departments reflect a scattering of individual interest in population research or teaching with little formal training and lukewarm collegial support. The young chairman of economics has submitted an ambitious national fertility survey proposal for Ford/Rockefeller policy program funding. Sociology's sole demographer is studying for a Ph.D. at Edinburgh. A full population geography paper is given in geography, and a young faculty member wants to pursue a foreign Ph.D. in this field. Statistics used to teach one course in demography, but once again the only person qualified to teach it was lost to foreign advanced degree training, so the course is no longer offered. There appears to be little population interest in either psychology or political science.

Of greatest possible relevance to solid institutional work in the area is the newly created Institute of Bangladesh Studies (IBS), whose director has just taken charge. He was previously chairman of the Department of Rural Sociology at Mymensingh Agricultural University and then directed the research program of the government's Integrated Rural Development Program (IRDP). It is too early to specify directions the new institute will take except in the most

general terms. It will heavily emphasize developmental needs in research and training, concentrating on problems of national identity, social integration, and development.

In addition to the director, three senior full-time core staff have already been recruited from other Rajshahi departments (History, English, and Economics). Plans are to add others at no lower than the associate professor level. A primary inducement to join the institute is relative freedom from teaching responsibilities with corresponding time and funds to pursue research. There are plans to begin a research-oriented two-year M.Phil. program with four to six initial students in July 1974, and Ph.D. level training is ultimately contemplated. Visiting professors or senior fellows from abroad and elsewhere are also to be recruited, and one female American social anthropologist with prior experience in Bangladesh has apparently already accepted a year's appointment in this capacity. Others, including Indians, are actively being sought. Major initial geographical emphasis will be on social and cultural aspects of the Rajshahi region, although it is expected that this research concentration will eventually expand to all of Bangladesh.

Depending on who is attracted to the institute and how much support it actually receives from the UGC and other outside agencies, serious population work from a strong multidisciplinary base might well develop at Rajshahi. The director is strong, experienced, well-trained, and highly oriented to the need for improving research methodology. He requires assistance at this stage in building a good library/documentation center and in identifying, perhaps helping to fund, foreign scholars who are willing to spend a year or so doing research and a little teaching, primarily in research methodology, at the institute.

### PUBLIC HEALTH AND FAMILY PLANNING

No degree-granting institutions in Bangladesh offer training or conduct research in health/family planning. The nearest approach is made by the Bangladesh Institute of Postgraduate Medicine (IPGM) which, as its name suggests, is primarily devoted to advanced training (and some research) in clinical medicine. Broadly speaking, the obstetrical and gynecological activities of IPGM could be interpreted as related to family planning. But this training is intended solely for clinical practice and has no population content.

A similar institution, the Bangladesh Institute of Public Health (IPH), focuses almost entirely on infectious and parasitic diseases, but devotes some attention to nutrition.

The medical schools have no population curriculum and Bangladesh does not have any training institutions for public health specialists. The IPGM does offer a diploma course (one year) in public health, which is described below.

### III. CONCLUSION

#### DEMOGRAPHY AND RELATED SOCIAL SCIENCES

The leading prospects for institutional development assistance in the social sciences as applied to population are perhaps apparent, from the viewpoint of existing teaching/research activity and capacity, desire to receive outside assistance, training of staff, local support, and access to relevant materials and hardware. (Not mentioned are institutions, such as the ISRT, already receiving or under a firm commitment to receive assistance.)

We have determined the following prospects: in Dacca, the BIDS and Population Planning Division once a decision is reached as to its location and functions; at the university the Departments of Economics and Geography and

perhaps at a later stage the planned Institute of Social Science Research; in Chittagong the Department of Sociology-based Population Studies Center or the department itself, whether or not a formal center is established; in Rajshahi perhaps the new Institute of Bangladesh Studies (but it is too early to say what form of outside help, if any, would be appropriate).

What is most urgently lacking from the scene at the moment, and what may be provided by one or more of the proposals for a National Social Science Research Council, a Bangladesh Population Association, the Population Study Centre at BIDS or Chittagong, the Population Division, or the UGC's projects committee, is a sense of purpose, priority, cohesion, and cooperation within the field. The 1974 pressures of reality and exigency are too strong to permit the enormous amount of patience, time and funds it took to build a BIDS --- perhaps the only truly solid social science research institution in Bangladesh -- and that was in a less hostile environment. With or without the assistance of foreign funds and advice, Bangladesh must provide the leadership, incentives, and sense of importance to those scattered few who are still willing to stay and use their research and teaching talents. They must be encouraged as a group to help work out and then work on the priority problems that face Bangalee society today, particularly in the many areas linked intrinsically with population dynamics. Researchers must believe that what they do is supremely important, not only to themselves but to their government and society. A first step in that direction may be for them to demonstrate their ability to produce the data, if not the insights that government requires.

Even without this locally supplied leadership, it will be critically important to attempt institutional development in Bangladesh, for she can no longer survive without institutions nor can she survive much longer with too

little food, too many people, and a dearth of foreign exchange. But without local leadership, without incentives, inputs of foreign donors will be able to prevent even the most dedicated social scientists from abandoning their loyalty, their profession, or their country.

#### HEALTH AND FAMILY PLANNING

Two institutional plans are worthy of comment. First is the plan, still imprecisely worked out, to provide a "comprehensive training program" in integrated health and family planning for medical undergraduates. The immediate objective would be to revise and modify curricula and to create additional posts to teach human reproduction, population dynamics, demography, and family planning (including MCH-based family planning) in Bangladesh's eight medical schools.

This program will be supported by UNFPA, with WHO responsible for implementation. Funds (\$655,714 over four years, 1974-77) have already been negotiated as part of the UNFPA \$10 million assistance grant to Bangladesh and will be utilized according to the following schedule:

1974	\$ 86,045
1975	221,842
1976	227,320
1977	<u>120,507</u>
Total	\$655,714

These funds will be used to provide additional physical facilities, equipment and supplies, training for faculty, and foreign technical assistance.

There is encouragement for medical schools to establish field practice areas and to build in a monitoring system with sufficient feedback information on graduates to permit instructional modification and improvement. A two-year foreign consultant in MCH/family planning will be provided by WHO.

The second development is the probable formation of a National Institute of Preventive and Social Medicine. Some budgetary provisions for initial

development activities of this institute will appear in the 1974-75 Annual Development Plan. The institute will be in essence a school of public health, but rather than intensively developing its own faculty and infrastructure, it plans to utilize other training resources within Bangladesh. For example, nutrition research and training will remain in the IPH, but students from the institute may receive nutritional training from staff members of the IPH. Similarly, epidemiology will be centered in the Malaria Program.

This training program will eventually offer either a diploma or master's degree in public health. In some ways it will supersede and replace the existing diploma in public health at IPGM. The current IPGM program has an annual enrollment of about six, offers a one-year course, and teaches almost entirely public health administration.

The new institute will presumably also develop its own departments, primarily those not offered by existing institutions. Two possible departments are community medicine and population/family planning.

UNDP has been considering some kind of assistance to the new institute (not with UNFPA funds).

The proposed activities are steps in the right direction. Introduction of population content into the medical curriculum and the development of manpower and relevant research in public health may help health/family planning program performance in the long run.

There may not be much demand for population curricula, particularly demography and population dynamics, on the part of medical students. Most youth who enter medical school see themselves primarily as potential clinicians; public health and related subjects (biostatistics, epidemiology, demography) are generally peripheral to a student's central interest. The same, of course, can be said of the faculty.

This poor uptake in undergraduate medical education indeed is also encountered in the United States and may be difficult to change without some structural changes in the student selection process. These activities will not be entirely wasted, however, for exposure is only a first step. Nevertheless, the major thrust of public health oriented education should perhaps be aimed at young graduates who have already satisfied to a modest extent their desire for clinical medicine and who have become increasingly aware of the determinants (especially multiple causes outside of physiological derangement) of illness and death. This awareness is only attained after practical clinical exposure. It is this level of physicians that deserves encouragement and support to extend their interest beyond clinical medicine per se.

The development of a National Institute of Preventive and Social Medicine is badly needed in Bangladesh. The country has virtually no public health biostatisticians, epidemiologists, or even good health administrators. At a time when manpower and skills are limited, the proposed scattering of disciplinary strength in different institutions is a good way to begin, but one consolidated and strong public health training and research institution with its own resources should be the ultimate aim.

#### SOURCES OF INFORMATION

Site visits. Lincoln Chen, April-May 1974, C. Stephen Baldwin, January-February 1974.

August 1974

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BURMA

Nicholas H. Wright

I COUNTRY SETTING

According to the preliminary results of the March 31, 1973 census, Burma's population was 29.8 million. This total was lower than expected, perhaps by 5 million people, using the estimates of one ministry. The preliminary total includes 0.8 million people said to be living in areas outside government control. The 1973 census promises to be the first available total count since 1931. The UNFPA has committed over \$1 million to help process, analyze, and publish the census.

The official government estimate of population growth per year was 2.1 percent through 1966, 2.2 percent through 1971, and 2.4 percent since 1971. Published crude birth and death rates for 1965 (latest available) suggest a yearly growth rate of 2.5 percent in the 104 towns covered in the registration area.

Selected demographic, social, and economic data follow:\*

Population (in millions)	
1972 estimate	28
1985 projection	39.3

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\*Source: Dorothy Nortman, "Population and Family Planning Programs: A Fact-book." Reports on Population/Family Planning. The Population Council. 1973.

Rate per 1,000 population (1971)	
Births	u
Deaths	u
Natural increase	u
Percent distribution of population by age	
All ages	100
Under 15 years	u
15-64 years	u
65 years and over	u
(Year)	(u)
Dependency ratio	u
Females aged 15-44	
(1972 estimate in millions)	
Total	6
Married	5
Density (1972 population/sq. km)	41
Percent urban of total population	
1970	19
1985 (projected)	23
Percent literate	
Male	u
Female	u
(Year)	(u)
(Age group)	(u)
Percent of eligible age group in school	
(Primary school age group)	(5-9)
Male	83
Female	77
(Secondary school age group)	(10-15)
Male	17
Female	11
(Year)	(1966)
Population (in thousands)	
Per physician	9
Per nurse	7
Per midwife	7
Per hospital bed	1.2
(Year)	(1971)
Gross domestic product (GDP)	
Per capita in US\$ (1970 or 1971)	78
Percent derived from agriculture	
(recent year)	34

Annual percent increase in real GDP	
Total	-2.2
Per capita	-4.2
(Years)	(1965-67)
Per capita food production, 1969-71	
average index (1969-61 = 100)	99

## II. POPULATION POLICY AND PROGRAMS

There is now no explicit, official population policy, only a vague sense that Burma needs and can support more people. There is considerable governmental interest in the 1973 census. Population is not mentioned in the second Four-Year Plan.

There is considerable concern in medical circles about population growth and family planning, mostly on the grounds that maternal and child health care is seriously compromised by the absence of family planning services. Illegal abortion is said to be a growing problem, especially in lower Burma. A high proportion of scarce maternity beds are said to be occupied by women recovering from incomplete abortion, as much as 40 percent in some hospitals. Introducing family planning services on the grounds of health appears to be a likely first step for Burma, if any step is taken.

The government controls the importation of all medicines. But some pills, perhaps 5,000 cycles a year, are brought in as "gynecological drugs." Condoms (sold by the piece) and pills are displayed openly at day and night markets in Rangoon and Mandalay. The goods were shopworn and the prices high. IUD's are said to be scarce in Rangoon, but available privately at high prices. Since medical care is socialized and free, the limited private medical practice can cover only a small proportion of the population.

Tubal ligation is said to be available in government medical institutions, although the obstacles are formidable. A law passed in the early

1960's requires forms to be filled out, certificates to be issued, and the recommendations of local authorities to be secured. In selected cases, there is a personal interview by the Sterilization Committee, which meets every other week. The successful applicant generally has five or more children and a past history of obstetrical difficulty. There was a private family planning association supported by IPPF and Pathfinder, which was forced to disband in the early 1960's.

### III. UNIVERSITY AND INSTITUTIONAL DATA

Several years ago the University of Rangoon was divided into an Arts and Sciences University and a host of autonomous institutions. This review is confined to the three Institutes of Medicine -- two in Rangoon and one in Mandalay -- and the Institute of Economics.

All institutes and the university are entirely government financed and closely controlled. They cannot accept assistance from agencies outside Burma without government permission. With the exception of the United Nations agencies, especially UNDP and WHO, there appear to be no examples of recent outside assistance.

The three Institutes of Medicine and their associated postgraduate schools have a rector and come under the director general of medical education, Ministry of Health. The institutes are grouped together in the following discussion.

#### Medical Institutes

The activities of the Medical Institutes are closely geared to the needs of the Health Ministry. Medical care is socialized in Burma and provided free of charge. Medical education is also free and highly competitive

despite the obligatory five years of government service after graduation. After obligatory service, there appear to be few choices other than continued government service, since, up to now, private practitioners have found it very difficult to obtain supplies of medicine and hospital privileges.

About 400 physicians are graduated annually from the three institutes. Until recently the government employed almost all physicians, but now needs only 250 a year. Under the new Four-Year-Plan the government will introduce a subsidized private practice scheme to expand curative services in large and small towns. In this way the government hopes to absorb most of the surplus physicians. In addition, some expansion of free care services is planned by building more Rural Health Centers. Physicians will begin to replace feldschers (health assistants) at the larger centers, with the feldscher-led team moving to centers in more remote areas. Because of the physician excess, feldscher training was stopped last year.

About 40 percent of each medical school class are women. This poses a problem, since women cannot be assigned to remote rural areas. The Ministry intends to limit women to about 25 percent of each graduating class. Women physicians usually are placed in urban health service settings, or at one of the several Research Institutes, or as teachers at one of the Medical Institutes.

The medical curriculum is uniform at all three institutes, extends over six years, and is said to be aimed at solving Burma's health problems. The emphasis is on community medicine and practical field experience at Rural Health Centers with physicians, particularly in the last two years of training. Lectures are given on population growth, but not family planning.

Postgraduate training is available at several postgraduate medical schools. Such facilities will eliminate the need to leave Burma for masters

level training after receiving the medical degree. Then only those few physicians selected to go on for highly technical and specialized training will need to leave Burma. One can apply to enter a postgraduate school two years after finishing the undergraduate medical course, including one year of internship. In the case of the School of Preventive and Tropical Medicine, forty apply for twelve places. The one year curriculum toward a D.P.T.M. includes medical statistics, public health administration, epidemiology, and a limited amount of population dynamics. WHO is active in Burma, currently supplying two long-term physician consultants to the Division of Medical Education.

Institute of Economics, Department of Statistics

A general demography text in Burmese is under preparation. Three members of the department were invited to make suggestions on the 1973 census. They recommended a post enumeration survey, but this has not been carried out, and the department has not been consulted again.

A member of the department is carrying out a "sample survey" of vital rates in a rural area near Rangoon and reports a birth rate of 17 and a death rate of 4.4. The survey involved asking the health assistant in the area to collect the necessary data.

Members of the department continue to publish in local journals, most of which are sponsored directly by the Ministry of Information.

IV. CONCLUSION

There is little that any agency, except perhaps those in the United Nations family, can do on behalf of population and family planning at the current time. At the professional, medical level, the issues are fairly well understood, but this group is not able to promote changes in policy. The

issues of high fertility, illegal abortion, and poor maternal health may prove provocative enough to prompt a debate and stimulate a different line of thinking toward family planning. The analysis of the 1973 census may also be expected to deepen understanding of population dynamics and perhaps lead to more sophisticated views.

SOURCES OF DATA

Site visit, Dr. Nicholas H. Wright. January 1974.

May 1974

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INDONESIA

Vincent H. Whitney and Brooks Ryder

I. COUNTRY SETTING

Indonesia's population, estimated at 132.5 million in 1973, is exceeded only by those of China, India, the Soviet Union, and the United States. Marked regional variations in population density occur: Java, Madura, and Bali, with less than 7 percent of the land area, contain two-thirds of the population. Java has a population density of 1,240 persons per square mile, making it one of the most densely populated areas of the world. Some pertinent demographic, social and economic data follow:\*

Population (in millions)	
1972 estimate	126
1985 projection	185
Rate per 1,000 population (1971)	
Births	40-45
Deaths	18-21
Natural increase	20-25
Percent distribution of population by age	
All ages	100
Under 15 years	45
15-64 years	52
65 years and over	3
(Year)	(1971)
Dependency ratio	92

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\* Source: Dorothy Nortman, "Population and Family Planning Programs: A Fact-book." Reports on Population/Family Planning. The Population Council. 1973.

Females aged 15-44 (1972 estimate in millions)	
Total	29
Married	26
Density (1972 population/sq.km)	85
Percent urban of total population	
1970	17
1985 (projected)	22
Percent literate	
Male	71
Female	49
(Year)	(1971)
(Age group)	(10+)
Percent of eligible age group in school	
(Primary school age group)	(7-12)
Male	69
Female	63
(Secondary school age group)	(13-18)
Male	11
Female	u
(Year)	(1965)
Population (in thousands)	
Per physician	21
Per nurse	6
Per midwife	25
Per hospital bed	1.5
(Year)	(1972)
Gross domestic product (GDP)	
Per capita in US\$ (1970 or 1971)	97
Percent derived from agriculture (recent year)	48
Annual percent increase in real GDP	
Total	5.1
Per capita	2.0
(Years)	(1965-70)
Per capita food production, 1969-71 average index (1959-61 = 100)	98

## II. POPULATION POLICY AND PROGRAMS

Indonesia's need for family planning on population grounds was recognized in 1967, when President Suharto signed the World Leaders Declara-

tion on Population, and with the establishment of an ad hoc committee on family planning in 1968. By 1970, the National Family Planning Coordinating Board was established by presidential decree, and a family planning program was launched. The Five Year Plan, 1971-1975, sets a target of 6 million acceptors for the period. The long-range goal is a 50 percent reduction in the fertility rate by the year 2001.

#### III. UNIVERSITY AND INSTITUTIONAL DATA

##### Health and Family Planning

###### University of Indonesia, Faculty of Public Health

The Ministry of Education and Culture authorized the development of a Faculty of Public Health (FPH) in early 1956. It opened in 1965. The faculty shared teaching resources, administration, and physical facilities with the School of Medicine's Department of Public Health and Preventive Medicine.

In April 1972 the rector of the university appointed a "nucleus staff." The rector was charged with responsibility for administering the faculty as an institution separate from the Medical Faculty and for developing a five-year development plan. This plan, officially approved by the Ministry of Education and Culture on September 25, 1972, described the development of a postgraduate training institution geared primarily to the training of leaders in the health field. Graduates were to be capable of diagnosing the health problems of communities, implementing programs to solve these problems, and evaluating their results. The plan outlines the faculty's goals and objectives and describes faculty and staff development, administration, space and equipment requirements, and budgetary needs; it also contains an implementation schedule of program activities.

Implementation of the plan began immediately and is currently underway.

The official name of the institution is Fakultas Kesehatan Masyarakat (FKM), Universitas Indonesia. It is located in Jakarta, Indonesia.

The goals and objectives of the faculty are as follows: The FPM will provide postgraduate and other training and services and do research in Public Health and related fields, which will enable it to participate appropriately in the efforts of health improvement in Indonesia.

Training will consist of postgraduate degree courses leading to the Master of Public Health (M.P.H.) and later to the Doctor of Public Health (D.P.H.).

It will provide "short-term courses" for select and specific groups for the purpose of further specialization or upgrade training (continuing education). The faculty will also coordinate training activities with appropriate existing training institutions.

In research, the faculty will provide training in research methodology for students, undertake research on major health problems of Indonesia, undertake research in health training teaching methodologies, undertake research in health delivery systems, develop and implement research and service projects, and coordinate research with existing research institutions.

The faculty will provide specific health and family planning services to segments of the population while utilizing these activities for training and research. It will provide educational and training services to departments of public health, medical schools, and other governmental agencies. It will provide a cadre of public health experts and consultants for other educational and service institutions, plan to supervise and evaluate health and family planning training and service programs. It will adapt training, re-

search, and service to the priority health improvement efforts of Indonesia as a whole. It will provide training, research, and service for the development of teachers of community medicine throughout Indonesia, and for physicians at the province, regency, and health center levels.

The faculty offers training leading to the Master of Public Health degree for physicians, dentists, veterinarians, and graduates from the faculty of Sanitary Engineering, who follow a one-year program of study, and to nurses, paramedical workers, and graduates from faculties of social sciences, whose training at the faculty lasts two years.

Educational activities are grouped into five disciplinary field areas: epidemiology, health education, behavioral science, health administration, environmental occupational health, and health statistics-demography, and into six complementary program areas: community medicine, MCH-family planning, population studies, nutrition, communicable disease control, school health, and continuing education.

Students are drawn from a pool made up of health center physicians and regency, provincial, and municipal health officers, faculty drawn from other training institutions (such as departments of community medicine or schools of medicine) and Ministries of Health, Education, and Culture, the National Family Planning Coordinating Body (BRKBN), and military and missionary physicians. The following student profile for 1973 has been projected:

Year	Total Number of Students	M.D., D.V.M. and D.D.S.	Types B.A. 1st year	B.Sc. 2nd year
1973	35	10	10	15
1974	45	20	15	10
1975	55	32	10	13
1976	65	40	15	10
1977	75	47	15	13

Actually, thirty-eight students enrolled in the first class in 1973, fifty are entering the 1974 class, and fifty-five are scheduled to begin in 1975.

Internal fellowships are available for most students; these cover tuition and a stipend for living allowances totaling US\$250-300 per student per month.

Of particular interest is the program area maternal and child health-family planning population studies. Under a USAID contract, the University of Hawaii School of Public Health undertook to assist the faculty in developing this area. It is providing technical assistance for developing a program to prepare leaders in planning, administering, and evaluating comprehensive maternal-child health and family planning services, and also providing training for MCH-family planning staff specialists to the level of Master of Public Health.

The project will develop research projects and a continuing curriculum review process directed to the five core curricula: (1) basic family planning-public health concepts, (2) Indonesian health parameters, (3) techniques of public health and family planning program planning, administration, and evaluation, (4) relevant field experiences, and (5) internship program.

The project also intends to develop an integrated health education program and build viable health education services at the national and provincial levels, to assure educational support for MCH-FP programs.

Fifty-eight health education specialists are to be trained during the five-year life of the project. Of these, about thirty-six will be given advance training in schools of public health in the United States or possibly third countries; the rest will receive the M.P.H. degree from the Faculty of

Public Health, University of Indonesia.

The project is supported by WHO and USAID, with the latter providing services through an American Public Health Association-AID contract.

The faculty is now developing plans for complementary activities in teaching, service, and research. Faculty and students will participate as part of their field work, in helping the Jakarta Municipal Health Department to identify problems and seek solutions to them in the program area of MCH-FP population. In addition, other service and research activities underway in other national or provincial programs will be utilized for teaching, fact finding, and program strengthening. Although the faculty has not yet been involved in projects, some of its members have been active in family planning.

Financial support for the faculty is presently derived from the university, BKRBK, (Indonesian Medical Board, WHO), and USAID. Budgetary projects are as follows:

<u>Year</u>	<u>Rupiah</u>	<u>Dollars</u>
1973-74	35,266,250	269,050
1974-75	118,133,550	270,870
1975-76	49,568,270	299,320

Of these amounts, a total of 126,600,000 rupiah is earmarked for staff housing and dormitory, and US\$364,750 for fellowships and consultant services.

A three-story building has recently been completed to house the faculty of Public Health and provide space for classrooms, offices, and library. These physical facilities are already inadequate for present and future needs in terms of classrooms, laboratories, and research facilities. The possibility exists that the school may move, in coming years, to a new campus in another section of Jakarta.

With only two full-time professional staff members and one foreign advisor, problems of authority and division of labor are not significant. Morale and commitment are high. Affiliation with a new, innovative, and exciting program, with ties to the School of Public Health in Honolulu, have given an exhilarating sense of importance to a program unlike any other in the university, or for that matter in the country.

Major strengths of the faculty include: a widespread belief that degree-level training in public health can be carried out better in Indonesia than overseas; strong support, including financial, from the rector and from the Ministry of Education; belief that training in public health is better carried out in Indonesia than overseas, and participation by many individuals and institutions during the planning stage.

Its weaknesses include: inexperience in activities of this scope and size; a faculty likely to be stretched by the competing elements of overseas training and rapid expansion of teaching, service, and research; and by the development of a field research and service program which will stretch the faculty dangerously at a time when teaching is barely underway.

#### Demography and Related Social Science

##### Indonesian Universities

There are twenty-six government universities and more than 200 private universities and colleges scattered throughout Indonesia, reaching into even as remote an area as West Irian. Most of the private schools are small, and they operate under the sponsorship and control of either religious groups or political parties. Satyawatjana University, a Christian school at Salatiga in Central Java, is perhaps the best of the private group. None has developed any

strong program in population, nor is this likely in the absence of specific outside grants. Program development funds would not be justified for the great majority of these private schools.

Of the government universities, the University of Indonesia in Jakarta and Radiah Mada University in Yogyakarta are ordinarily classed as national rather than regional institutions. In terms of students, faculty, and research, they are tied closely to the areas in which they are located. (A partial exception is Hasanudin University, which receives many students from the eastern islands as well as from Sulawesi, where it is located.) Nevertheless, the provincial governments seldom contribute to the costs of operating these universities, nor do they exercise any regulatory functions. University administrative policies are highly centralized in the Ministry of Education and Culture. Such matters as the number of students and staff, faculty and facilities, grants, and budget formulation are all either carried out or reviewed within the ministry.

In general, somewhere between one-tenth and one-fifth of a given university's budget comes from the central government. The remainder must be secured from student fees, supplemented by money from outside organizations. Despite recent increases, faculty salaries tend to be low even by Indonesian standards when compared with those of persons with university degrees working elsewhere. As a direct consequence, a good deal of a faculty member's time may be used to take on outside jobs, such as writing newspaper or magazine articles, lecturing outside his own faculty, or taking a part-time position in government or business. This in turn has limited the time available for research in population, as well as in other fields, except where such work is subsidized.

The goal of economic development is very much in the forefront in Indonesia. Development is seen not only as the end but also as the means by which the country is to be transformed and the promise of a sound economy and society and a stable political organization are to be made lasting realities. Thus, it is understandable that the social science research institutes at most of the universities are devoting particular attention to development problems. Except at the national universities, they are concentrating on regional development. The national government has specifically called on them to contribute regional statistics, together with analyses, which can be used in national planning and particularly in drafting the country's five-year development plans.

Given this strong emphasis, it is not surprising that a faculty of economics in a government university generally enjoys a high status. Except perhaps for medicine, it tends to be the strongest faculty. Because of the emphasis on economic growth and a perceived relationship between population trends and development objectives, social science population research has become associated primarily with economics faculties and has tended to be nonexistent or weaker in other social science areas. However, a training program in demography for teachers in all the government universities was begun at the University of Indonesia in 1971 and is funded through 1975. It is open to persons who are members of any appropriate department, including not only the social sciences but also such fields as public health, agriculture, and mass communications. A direct result of this program is that the faculties within which some population training and research are being carried out are becoming diversified. Nevertheless, university economists continue to be most prominently involved in demographic work.

The majority of the government universities are of relatively recent origin. Most were established in the 1950's and 1960's, with Gadjah Mada University dating back to 1949 and the University of Indonesia to 1946. (During the period of Dutch rule it was the Universiteit Van Indonesie, established in 1940 and closed by the war for independence.) By western standards the quality of their training and particularly of their research is weak, especially in those of lesser rank. Money is limited and salaries are low. The need for faculty to seek additional outside jobs reduces the time available for university work. The tradition of research is in most disciplines a recent one if it exists at all. The great majority of university teachers have been trained in Indonesia under this system to the doctorandus (roughly the master's degree) level. Their training has not included a knowledge of more than elementary research procedures, nor has it generally given them an appreciation of the purposes of research studies. Furthermore, research in itself does not enhance a teacher's status or serve as a basis for advancement in rank. To be sure, this is beginning to change with improving living standards and salaries, with an increased interest in government in research related to national development and policy formulation, and with a small rise in the proportion of university faculty who have had graduate study abroad. Certainly there is as much potential talent in Indonesian universities as in American ones. Nevertheless, there is a sizable job still to be done to raise the prevailing standards of teaching and research and to increase the ability of faculty and students to conduct research studies that will provide accurate information and conclusions of practical significance for development and other national goals.

### Demographic Training

For a number of years the Biro Pusat Statistik (Central Bureau of Statistics) has operated a training program for its own staff and for a limited number of statisticians in other government offices. This is a three-year, part-time course with a Bachelor of Science degree awarded for successful completion. Included in this program have been courses dealing with demographic statistics, particularly vital statistics. Graduates apparently acquire a good understanding of a limited range of demographic statistical operations and some knowledge of population trends in different parts of the world.

Aside from this and an occasional short-term course sponsored by an outside agency, social science population training has been limited to the universities. Until after 1970 the number of these with population interests was small. Now an increasing familiarity with population topics and, more specifically, the establishment of the training course at the University of Indonesia for teachers in other government universities, have resulted in the introduction of one or more courses in population at a number of other schools in the past two or three years. The idea of the training course was developed in 1970 by Professor N. Iskandar, director of the Lembaga Demografi (Population Institute) in the Faculty of Economics, and has subsequently been supported by the Ford Foundation. (Funds to cover half a year in 1972 were provided by the UNDP.) Initially there were three four-month courses, which were too brief to provide minimum competence in demography. Thereafter, the course was extended to a full academic year. The program is unique among less-developed countries in providing an opportunity to train faculty of every government university in the nation in population, to a level where they can introduce

or upgrade such teaching and research in their own institutions. There are about twenty participants in each class, selected from among applicants proposed by the state universities and brought to Jakarta with all expenses paid. As a consequence, there are already two to four persons with training in the field at every major public university in the country. Additional teachers will be added, often in faculties that have not previously been represented.

At the beginning of 1974 the University of Indonesia had had the longest experience in training students in demography. Ten years earlier, following the First Asian Population Conference in Bandung, the Demographic Institute was founded as a research organization, and courses in demography were introduced in the Faculty of Economics at both the undergraduate and the master's levels. Two senior teachers were joined by two younger men who had completed American M.A. degrees in sociology with a population emphasis. By the mid-1960's, this group was the strongest nucleus for work in demography at any university in Asia. They had already begun to train sardjana (master's) candidates in economics who elected a specialization in demography, as well as other students who elected individual population courses. Despite this auspicious beginning, the institute was reduced to a paper organization and the training program virtually thrown into limbo by the economic and political chaos in the last years of President Sukarno's rule. Furthermore, when a new government was established, three of the four staff members of the institute were called to its service, and the fourth went abroad to complete doctoral study. The institute and its training and research programs were not reactivated until 1970, under its present director. No degrees are awarded in demography, but graduate students are again electing that subject as a specialization within economics. (In the 1973-74 academic year there were six candidates enrolled in this program.) Undergraduate students in economics are all required to take a

one-semester course in substantive and technical demography, which includes laboratory sessions. They may also elect a course in demographic analysis. In addition, the Population Institute itself is conducting the one-year certificate program in demography for teachers already described. Also at the university, courses in population geography are offered in the geography division of the Faculty of Science by one staff member.

Gadjah Mada University in Yogyakarta was established in 1949 with faculties of agriculture and social science and has now grown into a national university with eighteen faculties and thirty-eight departments. It is one of five institutions chosen as "centers of development" by the Ministry of Education. (The other four are the University of Indonesia, Airlangga University in Surabaya, the Institute of Technology in Bandung, and the Agricultural Institute in Bogor.) It shares top ranking in the country with the University of Indonesia. In recent years it has made great efforts to secure overseas training to the doctoral level for its faculty and to develop a strengthened research program. Its aims are clearly set forth in five objectives, of which the first three are educational advance, research development, and public service.

The Faculty of Geography has offered courses in population for a number of years. These are required of majors in the Department of Population Geography, and because the subject is required in the final examination, at least one course in population is taken by the majority of the undergraduates in the other six departments. Population is also an optional course in the Faculty of Economics. In 1973 an Institute of Population Studies was created to carry out research, training, and service and support activities. Initially, this will provide opportunities for research training, especially in surveys, for some sardjana candidates. Ultimately the plan calls for courses open to students from all faculties.

In addition to the two national universities, a few population courses were offered before 1970 in a few of the regional universities. By 1974, principally as a result of the teacher training program at the University of Indonesia, such courses were given or planned at all of them. With a few exceptions, such courses are optional. Further, since there is rarely any way for a student enrolled in one faculty to take courses outside that faculty, only a small minority of students in any university receive training in demography. Those who do are most likely to complete a general introductory course with a combination of substantive and methodological items. Some students are also exposed to a few lectures involving population in courses on such subjects as urbanization, social change, and economic development. Students majoring in economics are most likely to take demography, but so long as the subject is optional and a majority of economics students are enrolled in a department of business administration or accounting, the proportion who actually receive even minimal training in population will be small. Another deficiency is that very few faculty members have had training in demography beyond the four-month or one-year course in Jakarta.

#### Demographic Research

The principal demographic research centers in Indonesia are the Demographic Institute at the University of Indonesia, the Population Studies Center at LERNAS (The Institute for Economic and Social Research), and the Central Bureau of Statistics. The Institute of Population Studies at Gadjah Mada University is a fourth such center, but since it was not established until 1973, its research program is only beginning. This center and one at Diponegoro University are the first at Indonesian universities to include all faculties with an interest in population and population-related research.

At a number of regional universities, demographic institutes were set up during 1973, and population studies are being carried on at a number of others either within an institute of social and economic research or some similar organization or simply as individual efforts by staff persons. (These embryonic institutes are generally set up within the Faculty of Economics by the staff members trained in demography in Jakarta. Such institutes now exist at Airlangga University, Surabaya; Brawidjaja University, Malang; Sriwijaya University, Palembang; and Andalas University, Padang.) The studies are largely concerned with regional population trends, with particular interest in fertility levels and attitudes and practices about birth control, migration and urbanization, and labor force. Several of the universities are cooperating in a research project organized by the Demographic Institute of the University of Indonesia, one specific purpose of which is to provide research experience to graduates of its training program and to maintain and further develop their interest in population. This is a study of fertility and mortality trends in the regions of Java, Bali, Sumatra, and Sulawesi where the universities are located. A total of 55,000 household interviews have been administered in both rural and urban areas, and detailed pregnancy histories have been collected. Data were also obtained on marriage and marriage dissolution and on the knowledge of, attitudes toward, and practice of family planning. It appears likely that this survey will provide the first reliable knowledge on the survey topics. Analysis of the data constitutes one of the major research undertakings of the Demographic Institute at the University of Indonesia.

The institute also carried out an urban unemployment survey in 1972 in Jakarta, Surabaya, and Bandung for the Department of Manpower and the

National Planning Agency. Another project was the publication of a Demographic Fact Book for Indonesia. A program for evaluation and analysis of the data from the 1971 population census and a number of smaller research projects have been undertaken. The Demographic Institute and former participants in its training program have cooperated in the administration in early 1974 of a questionnaire on knowledge of population and family planning to entering students at a number of the state universities and in a series of training courses in population education for teachers of geography and social sciences in upper secondary schools.

The Population Studies Center at LEKNAS is the government organization officially responsible for demographic research. Until recently, the professional staff has consisted of three members within a larger Social Sciences Division. In 1974 it became one of four separate divisions. Although the center may originate research projects, it has a primary obligation to carry out studies needed for government planning or administration. Recently these have included:

1. A study of Jakarta, comparing the educational, occupational and housing characteristics, and the reproductive behavior of a random sample of 3,000 households of migrants and permanent residents.
2. A study of changes over time in occupational and educational levels of migrants to Jakarta.
3. A survey of internal migration within Java, South Sulawesi, and South Sumatra.
4. An inventory of shortages of skilled manpower in industry.
5. The development of questions designed to provide a more realistic picture of unemployment and underemployment.

6. Projections of the nonagricultural labor force.

Collectively, these projects are a sizable undertaking for the two demographers, even with assistance from others on the social science staff. A working demographic advisor was added to the staff in the fall of 1974, but expansion of staff is a priority need.

Another planned LEKNAS activity is an annual workshop on population research in Indonesia. The purpose is to bring together all those who have population or family planning studies underway or planned in an effort to reduce duplication of effort and to make the maximum research contributions possible to government programs of fertility reduction.

During the 1960's, the Central Statistical Bureau conducted regular national sample surveys, which resulted in a limited amount of demographic data. These were, however, more a resource for research by others than research operations in themselves. No further rounds have been conducted since 1969, nor are there present plans to extend the series. The demographic section of the bureau has remained small but has nevertheless produced some high quality analyses of 1971 census data and has made a new set of population projections to 1981. The head of the section has recently gone abroad for graduate study, and a foreign advisor has arrived under a United Nations support program. There is therefore some potential for expanded demographic research in the future.

Evaluation of fertility and operations data from the national family planning program is regularly carried out by the National Family Planning Coordinating Board (BKKBN).

Overall, the quality of population data in Indonesia is not sufficiently accurate to serve as a firm research base. As a result, materials must be collected in the field, usually by sample surveys. The size of the

country is so great, separation of areas by water so significant, and the life patterns so varied that regional studies carried out by local research groups are a necessity. The number of persons qualified to do such studies is inadequate but has been increased by the training program and research coordination contributed by the University of Indonesia.

Universities with Potential for the Development of  
Regional Population Activities

Airlangga University

Airlangga University is located in Surabaya, East Java, Indonesia's second-largest city. Airlangga's reputation is not that of the second-best university, however, although its Medical Faculty is generally viewed as one of the best in the country. The university has six faculties: Medicine, Dentistry, Pharmacy, Veterinary Medicine, Law, and Economics. The Medical Faculty was the first to be established (1954). It is not only the biggest but clearly the preeminent faculty at Airlangga. There is no faculty of letters except in a Christian private university in Surabaya, and no faculty of faculty of social and political science. What subjects are taught in sociology, government and other social sciences, as well as in economics, are taught in the Economics Faculty.

Economics currently enrolls about 1,300 students, most of them for so-called "free study," which means that they are working full-time and come to the university on an occasional basis. There is now a six-year program, with a B.A. after four years of "general education" (centered around economics or business), followed by two years of additional study for sardjana candidates. There were between 400 and 500 such candidates in 1972, but this figure must be compared with that of about 150 doctorandus degrees awarded

since 1962. Many students are unable to pay the government-established fee of 6,000 rupiahs (less than US\$15), a fee that has been increasing over the last few years.

Economics is divided into three divisions: general economics, business administration, and accounting. There are fewer than 200 students in the latter, with the remaining 1,100 divided almost equally between general economics and business administration. Most of the students come from Surabaya or nearby East Java, with some from Bali, Sulawesi, and other eastern regions.

The staff of the Economics Faculty consists of twenty-two full-time and forty part-time teachers. Most have been trained at Airlangga, but four or five have come from Jakarta. There is a research department also, and a fledgling demographic institute, a subdepartment of the research department, to do research and training. patterned on that at the University of Indonesia. In particular, it was set up to collect data on population and development in East Java. There are four members of the faculty with population training or interests, of whom one has studied abroad at the master's level. Demography is included in development and some other subjects but does not yet exist as an independent subject.

#### Andalas University

Andalas University is located in Padang, a city of nearly 200,000 persons in West Sumatra. The location of the city is physically beautiful, but it is off the major travel routes and, from the viewpoint of location theory, not well suited for industrial development. It is, in fact, a slowly growing city and region with substantial out-migration.

The university itself is of modest size. It has the reputation of

being an active school, partly no doubt because of the efforts of the rector to develop various programs. Nevertheless, the university has great difficulties in getting support for programs of research or training compared with the more prestigious universities in the larger cities.

There are six faculties at Andalas: Medicine, Agriculture, Animal Husbandry, Economics, Law, and Letters. In 1970 there were 632 students in the Medical Faculty and 808 in Economics, as in several of the other universities, these figures were lower than in past years and continuing to drop gradually in fact. In 1969 a quota approved by the Ministry of Education and with the difficulties students face in paying increasing tuition. In 1970 there were 3,078 students in all, down from 3,882 in 1966. The central government appropriated one million rupiahs (or about \$2,500) toward the 1971-72 annual budget of 5 million rupiahs. The rest had to come from students fees.

So far the only faculty with a developed population interest is Economics. This faculty was established in 1957 and reorganized in 1964 when Andalas became a state university. The teaching staff of thirty-three full-time and ten part-time persons was trained largely at this university to the Magister level. However, three or four persons took higher degrees at the University of Indonesia, Gadjah Mada, or Padjadjaran University. He is the author of West Sumatra, Facts and Figures (1971) and Regional Income, West Sumatra Province, 1966-1969, both published by the Institute for Economic and Social Research, which is a struggling department of this faculty.

The main interest here, like that of other faculties of economics, is regional development. Two teachers have completed the four-month population training course under Professor Iskandar in Jakarta, and a third has gone through the ten-month program. In addition, one staff member of the Faculty of Agriculture has done so. In Economics there is one introductory

course in demography, which is optional for third-year students, and one advanced course planned for the fourth year.

The three demographers from Economics have participated in the University of Indonesia fertility and mortality survey, one of them as the regional coordinator for Central Sumatra. One has embarked on a broad collection of regional population data and has been working closely with the area office of the Central Bureau of Statistics.

#### Brawidjaja University

Brawidjaja University is located on the outskirts of Malang, East Java, a provincial capital of over 400,000 people, 60 kilometers south of Surabaya. Founded in 1957 and recognized as a government university only in 1963, it is a relatively small school with only six faculties: Agriculture, Economics, Engineering, Government and Business Administration, Law, and Veterinary Science. There are around 4,000 students in the entire university, of whom some 500 are sardjana (M.A.) candidates. There were 76 full-time and 374 part-time teachers in 1971. There is no medical faculty or department of public health.

The Faculty of Economics is the only one with a population interest. It had 782 students in 1972, all specializing either in general economics or in business administration and management. Of these, 264 were fourth- and fifth-year doctorandus candidates. However, only 65 such degrees have been awarded by this Faculty since 1963. Many students drop out at all levels because of their inability to continue to pay the fees set by the Ministry of Education. Of the faculty's 1971-72 budget of 8,000,000 rupiahs (or something over \$20,000), over 90 percent came from student fees, with slightly under 10 percent contributed by the central government.

There are twenty-three persons full-time and twenty-four part-time on the teaching staff, including the dean and vice-dean. Two have completed the four-month training course in demography at the University of Indonesia, and two, the year course. At present only one is teaching demography. Population is also discussed in subjects such as economic development, but only students in their third year in economic development or in economic planning attend these lectures. There is a Research Institute, but it has not carried on any research of a demographic nature except for a small project on internal migration.

#### Hasanuddin University

Hasanuddin University had its origin in 1948 when the University of Indonesia opened a branch of the Faculty of Economics in Makassar, Sulawesi. Graduates of the two faculties (Law and Social Sciences-Education) were produced in 1952 and 1953 respectively. The present Hasanuddin University dates from 1956 and has nine separate faculties: Agriculture, Animal Husbandry, Economics, Engineering, Law and Social Sciences, Letters, Mathematics and Physical Sciences, Medicine and Social and Political Science.

The staff at all faculties combined amounted to 1,693 persons in August 1971. Of these, all were full-time and 1,182 part-time. For the separate faculties that reported some interest in population, staff members at that time numbered:

Economics	52 full-time and 89 part-time
Medicine	144 full-time and 175 part-time
Social and Political Science	40 full-time and 36 part-time
Agriculture	53 full-time and 219 part-time

Student enrollment in 1971 in these faculties was:

<u>Faculty</u>	<u>Entering</u>	<u>Total</u>	<u>Graduating</u>
Economics	182	902	141
Medicine	75	702	203
Social and Political Science	84	1,685	212
Agriculture	122	455	22
All Faculties	959	8,559	841

These students were preponderantly candidates for undergraduate degrees, with probably under 10 percent enrolled for or receiving the doctorandus (M.A.) or M.D. degrees. As in the other provincial universities, a large proportion of entering students are forced to drop out because they cannot pay the tuition, which is high compared to the income of most of their families.

The Economics Faculty has two divisions, general economics and business administration. About 45 percent of the students enrolled in the first, the remaining 55 percent in the second. Of approximately 900 students, about 100 were studying for the doctorandus. Over the last nine years the faculty has awarded about 200 such degrees.

The Economics Faculty has one person who has completed the short demographic training course in Jakarta and another who took the one-year course. However, a third graduate of the special course at Jakarta does teach such a course in the Faculty of Agriculture.

The Faculty of Political and Social Sciences is located apart from the rest of the university. It reported forty full-time lecturers and three assistants, but no persons with the rank of professor. There are five departments: Sociology, Mass Communications, Politics, Journalism, and Government. The main interest of the Sociology Department is in community development. The great bulk of the students are in the Public Administration Department. There is one undergraduate course in population, and the subject is

included in several courses, such as rural and urban sociology. There is a Social Research Institute, and one staff member has completed a one-month training course in family planning at the National Family Planning Institute in Jakarta.

The university library has reported 66,806 books. The libraries of the separate faculties total: Economics, 2,006; Medicine, 3,415; Social and Political Science, 1,369, and Agriculture, 1,451 volumes.

#### Diponegoro University

Opened in 1874 under private auspices, Diponegoro became a public university in 1961. It is located in Semarang, Indonesia's fourth-largest city and the capital of central Java, the province in which population pressure is the most severe. The university has seven faculties: Animal Husbandry, Economics, Engineering, Law, Letters, Medicine, and Social and Political Science. In 1972 there were 254 full-time staff members and another 415 part-time. Students enrolled numbered 5,003, of whom 1,392 were women. Most were drawn from central Java. The Economics Faculty had a total of 803 students, with about 700 in Social and Political Science.

The Faculty of Economics had twenty-four full-time staff, four of whom have completed one-year training courses in Europe or Australia. Of the 803 students, 513 were in their first three years of study and the remaining 280 in the last two years (when they are considered sardjana candidates). Eighty per cent major in business administration, the remainder in general economics. There is no separate course in demography, but the subject is included in a course on economic development. Stated research interests are agricultural economics, economic development, and demography, with a joint focus recently on these problems, plus health and social organization in poverty areas of

Central Java.

The Faculty of Social and Political Science has four departments: Business Administration, Government, Mass Communications, and Public Administration. There are twenty-five full-time staff members, two of whom have had beginning graduate study abroad. Thirty of the 700 students are at the sardjana level. Demography is covered in courses in sociology and economic development, required of all students except those in Business Administration.

There is a small but active Population Research Center of four persons, two from Social and Political Science, one from Economics, and one from Medicine (who has an M.P.H. from Columbia University and heads the group). The other three, along with one member of the Engineering Faculty, have completed the training course in Jakarta. The center has done several surveys, relating mostly to fertility and family planning, and is also involved in the University of Indonesia fertility and mortality projects.

There is a university library with some 13,000 books and journals, and there are faculty libraries. The one in Economics has about 5,000 volumes and is good in several areas, not including demography.

Padjadjaran University

Padjadjaran University, the regional university for West Java, is located in Bandung, the third-largest city in Indonesia, with about 1,250,000 residents. A government university since 1957, it now has ten faculties: Agriculture, Animal Husbandry, Economics, Law, Literature, Medicine, Natural Science, Political Science, Psychology, and Publicity and Journalism.

One of the largest is the Faculty of Economics, with a 1970 enrollment of 1,100 students. There are three departments: Accountancy, Business Economics (the largest), and Social Economics. Sociology is taught within

(the Faculty of Agriculture). There is no separate course in demography, but population topics are treated in courses on economic development.

There is a Bureau of Economic and Social Research, where staff research is concentrated. Major emphasis is given to the regional development problems of West Java, and there has been a particular focus on income, manpower and employment, and small scale business.

Three members of the faculty have completed the training course in demography at the University of Indonesia and are now offering courses with some population content to their own students.

#### Sriwijaya University

This university located in Palembang, South Sumatra, is composed of 11 faculties and several institutes: Agriculture, Economics, Education (formerly a teachers' college), Engineering, Technology, Law, Medicine, and Teacher Training.

The only faculty with an interest in demographic studies is the Faculty of Economics. The rector is also dean of this faculty and is interested in the development of demography. There were about 400 students in 1973, fewer than 100 of them at the sardjana level. The first sardjana was awarded in 1963, and up to the present fewer than 100 such degrees have been awarded, only two to students in general economics. Of the thirty full-time staff only three or four are considered to be in general economics, although there is no rigid line between the three divisions.

This faculty has cooperated with ILEKNAS and with Kyoto University on a regional income study of South Sumatra. It has also been engaged cooperatively with the Institute of Technology in Bandung on the preparation of a 20-year master plan for the city of Palembang.

The faculty has three graduates of the University of Indonesia's demographic training program, one of whom has studied for an additional year in the UN-Indian training center in Bombay. Two more members of the faculty, both strong in mathematics, attended the 1973-74 demographic training program in Jakarta. In terms of numbers trained, Sriwijaya University is therefore among the Indonesian universities with special staff strength in demography.

This group has participated in the Indonesian fertility-mortality survey and in the 1974 survey of population and family planning knowledge given to entering students. Later in 1974 they are to conduct a KAP survey for Palembang. They have also completed a two-week training course on population for teachers of geography and social sciences in upper secondary schools in Palembang and plan to run two more such courses during 1974.

Before 1973, population was taught in the Faculty of Economics in the second year in a course in economic development, but in 1973 this was upgraded to a formal course in demography, the first half dedicated to theory and the last half to practice.

#### Udayana University

Located in the small capital city of Den Pasar, Udayana University serves the more than 2 million inhabitants of the island of Bali. A separate institution since 1962, the university currently has eight faculties: Agriculture, Animal Husbandry, Economics, Education, Engineering, Law, Letters, and Medicine. Most of the teachers hold the equivalent of master's degrees from Gadjah Mada and other universities on neighboring Java. There is only a limited amount of research because of lack of training to undertake it and because of multiple job holding and consequent time restrictions.

In 1972 there were 2,196 students enrolled, including 72 sardjana

candidates. Medicine had 315 students and Economics 277, including 45 sardjana candidates. The Economics Faculty had 14 full-time and 11 part-time members. There was no course given in demography, although population topics were introduced in economic theory and economic development courses, taught by two graduates of the University of Indonesia training course. A third graduate had introduced a required third-year course in biostatistics and demography in the Faculty of Medicine. There was also a short course in MCH-family planning in the fifth year.

#### Other Universities

There are a small number of other universities where the general level of instruction and strategic location combine to suggest that they can make use of staff training, small research grants, library materials, and other restricted institutional development support to establish competent teaching and regional research programs in population. Among these are two in Sumatra: Sumatra Utara and Sjah Kuala.

Sumatra Utara is in Medan in the north, the country's fifth-largest city with well over half a million people. It was established as a federal university in 1952 and has six faculties. Agriculture, Economics, Education, Engineering, Law, and Medicine.

Sjah Kuala University is in Acah, a small and rather isolated center in the extreme northwest. It was established in 1961 and has only four faculties: Economics, Education, Law, and Veterinary Medicine. It is, however, one of four provincial universities that have received some assistance from the Ford Foundation.

There is also the Technical Institute in Bandung, West Java, which is the leading center for higher education in planning and fine arts. Students concerned with planning could benefit particularly from some knowledge

of population processes and urban growth patterns.

Finally, a list of the remaining government universities, the dates of their establishment, and a list of their faculties is appended:

Jambi University, Jambi, Sumatra (1963)

Faculties: Agriculture, Animal Husbandry, Economics, Law

Jember University, Jember, East Java (1957)

Faculties: Agriculture, Economics, Education, Law, Letters,  
Social and Political Science

Jendral Soedirman University, Purwokerto, Central Java (1963)

Faculties: Agriculture, Animal Husbandry, Biology, Economics,  
Science

Kalimantan Timur University, Kalimantan Timur (1962)

Faculties: Agriculture, Forestry, Mining, Public Administration  
and Management

Lambung Mangkurat University, Bandjarmasin, Kalimantan Selatan (1960)

Faculties: Agriculture, Economics, Education and Political  
Science, Law

Mataram University, Tjakranegara, Lombok, Nusatenggara Barat (1963)

Faculties: Agriculture, Animal Husbandry, Economics, Law

Nusa Tjendana University, Kupang, Timur, Nusatenggara Timur (1962)

Faculties: Agriculture, Management, Public Administration,  
Veterinary Medicine

Palangka Raya University, Palangka Raya, Kalimantan Tengah (1963)

Faculties: Agriculture, Economics, Forestry

Patimura University, Ambon, Maluku (1962)

Faculties: Agriculture, Law, Political Science, Veterinary  
Medicine

Riau University, Pekanbaru, Riau, Sumatra (1962)

Faculties: Economics, Education, Fisheries, Physics and  
Mathematics, Political and Social Science, Teachers'  
Training

Sulawesi Utara University, Manado, Sulawesi (1961)

Faculties: Economics, Law, Medicine, Veterinary Medicine

Tanjung Pura University, Pontianak, Kalimantan Barat

Faculties: Agriculture, Economics, Law.

Tjenderawasih University, Djajapura-Irian Barat (1962)

Faculties: Agriculture, Forestry and Veterinary Science;  
Education, Law, Public and Business Administration; Teacher  
Training

IV. CONCLUSIONS

The major limiting factor in the development of health-related institutions in Indonesia appears to be not money but people. The expanding program -- expanding both in numbers and in outreach -- will place extraordinary demands on the scarce supply of trained people in Indonesia. It is clear, however, that even the manpower resources of the premier institution, the Faculty of Public Health of the University of Indonesia, are stretched painfully thin. For the short run, then, institutional development focus would appear to be most appropriately restricted to that university. Such development would ideally contemplate eventual expansion to provincial universities, either through a planned program for training faculty from those universities or (if sufficient resources were available) through satellite institutional development programs related to the University of Indonesia.

Aside from the small groups at the Demographic Institute and at LEKNAS and the geographers at Gadjah Mada University, there was almost no interest in either teaching or research in demography in Indonesia before the 1970's. With the political changes of the late 1960's, the subsequent great efforts toward setting and achieving development goals, the increasing realization of the relationship between economic and demographic variables, and the broader context of a worldwide interest in securing improved population data and analyses, efforts to increase and improve the quality of population research and training have grown quite rapidly.

The greatest handicap has been and continues to be the scarcity of properly trained demographers for teaching, research, and government service. There are still fewer than a dozen persons throughout Indonesia with sufficient training in demography to qualify them as experts. A number of these are serving in important government positions, and although they are needed there, this effectively cuts them off from active participation in both training and research in demographic fields for the duration of their appointments.

Given the recent development of population interest in Indonesia, the study of demography is not supported by any traditions, nor do students generally understand how a demographer can find a job since there are no positions in the country with that title. Like their counterparts in many other countries, students tend quite understandably to be concerned with their own futures and to select training that leads directly to established occupations such as law, medicine, or accounting. With individual exceptions perhaps, the brightest and most able are not drawn to population. To attract them, it will be necessary to provide more information on how training in demography is used and the kind of career opportunities it opens. In particular, it must be

understood that the greatest need in terms of numbers is for economists, sociologists, statisticians, geographers, and other specialists in recognized disciplines who have secured advanced training in those fields with a specialization or later training in demography. Economists with such expertise are increasingly needed to analyze economic-demographic interrelations. Sociologist-demographers are important for urban planning and, with increasing emphasis on social development, will be needed to study the linked problems of urbanization, social welfare, and population distribution and composition as well as fertility decision making within the family and the wider community. Beyond this, attracting better students will require more than average support through fellowships and assistantships. It will require searching for such students by the universities or whatever agencies are prepared to offer financial aid and advice. It will mean bringing many more undergraduates into touch with demography by introducing competent teaching and research supervision into more universities and faculties.

To secure any considerable number of qualified teachers, there is an urgent need to build training programs for master's level students at some half-dozen regional universities. Provincial autonomy, the tendency to draw students from local areas, the great size of the country, the expense of sending master's candidates abroad, and the great difficulty most Indonesian students face with a foreign language all strongly underscore the need to train graduate students within the country. To train these students, as well as to acquire the solid research skills needed to fill a variety of high echelon administrative and policy-making positions in government and business, a selected few will need to be sent abroad both for study toward Ph.D. degrees and for non-degree programs. The latter could be for one academic year or for some other

limited period of time at centers where programs can be hand-tailored to a student's needs. The alternative of establishing programs of equal strength within the country is too costly and as yet could not be fielded except with expatriates.

Within Indonesia, programs for sardjana training and centers for population research should be developed together at some half-dozen strong regional universities, taking into account the need for training in demography in association with various other fields of study as well as for adequate coverage of the major geographical areas. The relative strength of the economics faculties and the emphasis on population and development provide a greater-than-average opportunity to develop effective programs of economic demography in Indonesia. Again, in view of the predominance of agriculture in the economy, links with agriculture and with rural sociology should not be neglected. Thus, the Agricultural Institute at Bogor should be explored as a possible location. In another direction, engineers, scientists, and planners concerned with building highways, dams, and cities should have the opportunity to acquire population competence, perhaps first at the Institute of Technology in Bandung. Among other regional universities, particular consideration might be given to Hasanuddin University in Ujung Pandang, South Sulawesi; Sriwijaya University in Palembang, South Sumatra; Andalas University in Padang, West Sumatra; Sjah Kuala University at Aceh in northern Sumatra; Padjadjaran University in Bandung, West Java; Airlangga University in Surabaya, East Java; Udyana University at Den Pasar, Bali; and Lambung Mangkurat University at Bandjannasin, South Kalimantan.

Still other universities might demonstrate their priorities at a future time, based on trained staff, willingness to undertake a program, and

other relevant factors, but overbuilding should be avoided. Government can encourage training programs by employing able graduates in a variety of posts, both at the national and provincial levels.

Expatriate demographic advisors are no strangers to Indonesia. Demographers and statisticians with population interests have been attached to the Central Bureau of Statistics for some years and have helped measurably to improve the quality of the population censuses. Following the 1971 count, an American demographer was brought to the bureau specifically to assess the quality of the work already completed. Although there is no foreign demographic adviser at the National Planning Board, one or two of its economic and statistical advisers are competent in at least some aspects of population. Even so, population has not received much attention so far in choosing advisers. The National Family Planning Coordinating Board has a sociologist-demographer trained at Chicago as an advisor to its evaluation activities and another as a one-year intern. The Demographic Institute of the University of Indonesia has two advisers, both with a Ph.D. in demography from the Australian National University. One is an economist-demographer, the other a technical demographer. The population center at Gadjah Mada University has also shown interest in having an advisor. As programs develop at regional universities, they can be expected to seek advisers, although once the leading institutes have secured sufficient staffs, they can provide part-time advisory services to the smaller centers if such a program receives outside support.

The scarcity will be altered only as a large number of Indonesians secure advanced training in demography. Many who do will no doubt be drawn into administrative positions in universities and government agencies. Consequently, a prediction of a continued need for foreign advisers over the next

decade seems both safe and conservative. The kind of advice wanted, however, is professional and technical. Persons are needed for their knowledge and skills in the population field, research design, survey methods, and statistics. They must be working experts, not policy makers or armchair managers. Indonesians are competent to invent programs and direct policy, as the work of the Population Institute suggests. Experts can help substantially with research training, but their usefulness as teachers in university programs will be limited unless they have a good command of the local language.

The opportunities for support of all kinds of population activities by foreign agencies, both public and private, are enormous. For this very reason, their activities require coordination. This is probably best achieved by discussion and a regular exchange of information about agency interests, since no one donor wants, or should be required, to relinquish the freedom to decide what it can do most effectively. Nor should applicants be restricted in seeking support.

Despite some outstanding individual accomplishments, all established Indonesian social science population programs are weak and in need of further financial and technical support. As has already been emphasized, the need for a larger and better-trained staff is paramount. The demands placed on the Demographic Institute of the University of Indonesia by outside agencies exceed the ability of its present limited staff. The assignment of several of its junior members to the Indian training center at Deonar (Bombay) and the recruitment for 1973-74 of three other members for at least one year of training in the United States are indicative of attempts to meet this primary deficiency of staff. However, in view of the institute's present expenditure of effort on its training program for teachers in other universities, a high priority should

be given to building the Population Studies Center at IKNAS to the point where it can handle the increasing demographic research needs of the government. Here again, the systematic building of necessary manpower must have the highest priority. Additional well-trained staff will also be needed at Uadjah Mada University if its newly established Institute of Population Studies is to fulfill its function adequately, but plans for such training have been made and support provided. An expatriate working advisor at all three sites is another important need until a local staff, adequate both in numbers and in technical skills, has been built.

Partly because of the training course initiated by Professor Iskan and there is interest in developing a population research center along with a research course in demography at regional universities. Limited support for specific research projects of local and interest, which can be handled by local staff, will be reasonably needed, particularly to maintain the interest and initiative already stimulated. However, this kind of support should not compete with the building of strong centers, ultimately involving several faculties, at two universities in Indonesia and, if present plans succeed, at Uadjah Mada. With this effort well established, attention can be turned to careful selection of a few regional universities where more limited program centers of good quality can be developed. If at all possible, the universities should demonstrate their own support by financial contributions, even if these are limited. This is admittedly difficult under the current system, in which a large part of all university expenses must be met from tuition charges. But ultimately, increased support of the universities by the federal government, and perhaps contributions from the provincial governments as well, are needed. Meanwhile, core support from abroad for centers as well as

specifically for research projects and training fellowships, both local and foreign, must continue.

An association of Indonesian demographers and an Indonesian population journal were both founded in December 1973, again largely through the efforts of Dr. Iskandar. This is a progressive step, developed internally, which will benefit from limited foreign aid.

The need for better population data, particularly vital statistics, and for improved evaluation of family planning statistics is clear. Efforts to meet these needs have already been made, but much greater effort will be required. Similarly, support for the introduction of some kind of population unit in the National Planning Board will be important when the need for such a unit to contribute to planning and policy making becomes more apparent.

Up to the present, a number of organizations have contributed to social science population activities in Indonesia. These include the Ford Foundation, the Population Council, the UNDP and the UNFPA, the World Bank, USAID, and to a lesser degree the International Development Research Council (of Canada) and the Rockefeller Foundation. Indonesia's needs in this area are all inclusive and justify continuing contributions by these agencies and others. So far as the Population Council is concerned, it can be particularly effective by maintaining a representative in Indonesia who can devote a sizable amount of time to working closely with university centers and government agencies that have or may develop population activities. He should be a professional who can provide guidance on research design, data analysis, and other technical matters on request. But he should also devote substantial time to locating outstanding young men and women for further training, to helping develop positions in which their skills can be used, and generally to promoting the growth of population interest, knowledge, and application throughout

Indonesia.

SOURCES OF INFORMATION

Site visits by Vincent H. Whitney and Brooks Ryder, Spring 1974.

Indonesian National Family Planning Programme 1969-1974. National Family Planning Coordination Board, Jakarta.

April 1974

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REPUBLIC OF KOREA

Vincent H. Whitney and George C. Worth

I. COUNTRY SETTING

Since 1961, Korea has undergone intensified national development and has experienced substantial economic growth averaging an increase in gross domestic product of 11.2 percent per year; literacy is high. There is a strong trend toward migration to cities, especially to Seoul; age of marriage is rising and fertility is declining. Some salient demographic social and economic data may be found in the table below:\*

Population (in millions)	
1972 estimate	33.5
1985 projection	45.9
Rate per 1,000 population (1971)	
Births	31
Deaths	9
Natural increase	22
Percent distribution of population by age	
All ages	100
Under 15 years	42
15-64 years	55
65 years and over	3
(Year)	(1970)
Dependency ratio	82
Females aged 15-44 (1972 estimate in millions)	
Total	6.6
Married	4.1
Density (1972 population/sq.km)	340

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\*Source: Dorothy Nortman, "Population and Family Planning Programs: A Factbook." Reports on Population/Family Planning. The Population Council. 1973.

Percent urban of total population	
1970	38
1985 (projected)	54
Percent literate	
Male	89
Female	)
(Year)	(1970)
(Age group)	(10+)
Percent of eligible age group in school	
(Primary school age group)	(6-11)
Male	98
Female	98
(Secondary school age group)	(12-17)
Male	56
Female	38
(Year)	(1971)
Population (in thousands)	
Per physician	2
Per nurse	2
Per midwife	5
Per hospital bed	2
(Year)	(1971)
Gross domestic product (GDP)	
Per capita in US\$ (1970 or 1971)	282
Percent derived from agriculture	
(recent year)	28
Annual percent increase in real GDP	
Total	12.2
Per capita	9.7
(Years)	(1965-70)
Per capita food production, 1969-71	
average index (1959-61 = 100)	117

## II. POPULATION POLICY AND PROGRAMS

Traditional Korea had no deep interest in population issues; the culture favored large families with many sons, but discouraged the remarriage of widows. Growth was slow.

With the introduction of western culture in the late nineteenth century and Japanese domination in the early twentieth century, mortality

declined, although fertility did not fall until the 1960's. Scholars began to be concerned about population growth in the 1950's, but organized efforts for fertility control did not begin until 1960. In 1961 the Korean government announced a policy to reduce its growth rate from approximately 3 percent to about 2 percent by 1971 (as has happened), motivated by a conviction that rapid population growth was a serious obstacle to the economic development of the country.

Before the official program, some contraception was practiced: the Ota ring was used in small numbers among the upper classes and abortion among the upper and lower classes. Current government policy is to reduce the population growth rate to 1.5 percent per annum by 1976 (the end of the third five-year economic development plan), through delivery of family planning services in the government public health network. The government also encourages external migration and discourages urban growth (through rural development, tax incentives for relocating industry from urban centers, the establishment of industrial estates near small cities, and so forth).

Family planning is largely carried out through official programs supplemented by private activities. The program stresses recruitment of women to practice contraception through a system of field workers. Targets are set and distributed to health centers and workers; supplemental programs are carried out through military units, social welfare agencies, and hospitals. The program relies primarily on face to face communication between field workers and women.

Both government and private institutions have important roles in higher education. Government policy favors technical education and natural sciences over humanities and social sciences. In the social sciences it favors

areas like business administration, economics, and commerce that are considered supportive of national economic development.

The government manages all public schools, publishes elementary school textbooks, approves all secondary textbooks, and subjects private education to government policy control and general inspection.

### III. UNIVERSITY AND INSTITUTIONAL DATA

#### Medical and Public Health

##### The Korean Institute for Family Planning (KIFP)

The Korean Institute for Family Planning is a semi-private institute located at 115 Nokbun-dong, Suhdaemoon-Ku, Seoul. Its objectives are: to conduct research on family planning and population growth; to conduct training programs for family planning workers, international visitors, and other persons related to the execution of the national program; to provide technical advice for family planning program development; to develop educational materials for distribution, and to maintain contact, through information exchange and technical cooperation, with universities, foreign agencies, and other institutions. There is a research staff of twenty full-time and one part-time, and an annual budget of \$246,000 from a \$2,800,000 endowment fund. The KIFP received \$164,000 from external donors in 1972.

Its training program consists of: one-week courses for field workers, supervisors, and administrators of the National Family Planning Program; ad hoc international training; and occasional specialized seminars in cooperation with such organizations as the East-West Communication Institute and the Economic Commission for Asia and the Far East.

Research includes: evaluation of service statistics, spot checking of service statistics; evaluation of special family planning programs; a

national fertility survey under the World Fertility Survey Program; research in improvement of vital registration.

The director of KIEP is Dr. Hong, Jong Ewan, a former vice-minister of Health and Social Affairs with long experience in public health administration. He has no specialized training in research family planning. The deputy director is Dr. Kim, Yong Wan, former executive secretary of the Planned Parenthood Federation of Korea. He has no special training in research or education.

KIEP has shown considerable competence in carrying out both small and large field surveys with relative good quality data. Report writing and analysis have been weaker, although there have been recent signs of improvement. The institute has not worked on the large amount of data available from past studies or other projects for further analysis.

Data processing is done by counter sorters and arrangements are being made for computer terminal connection with the Korean Institute for Science and Technology IBM 360.

KIEP's main role has been in service statistics; it has limited itself to reporting, summarization, tabulation, discussion, and various publications, and has not worked to improve the quality of service statistics. Another important role has been in fertility and vital rates through surveys made in 1971 and 1973 and through its participation in the World Fertility Survey in 1974. This function may become less important as the Bureau of Statistics of the Economic Planning Board improves its demographic capacity.

Most income is from an endowment fund set up in 1972 but declining interest rates have reduced income. The institute is receiving assistance from the United Nations Fund for Population Activity amounting to \$75,000 in

1974; the assistance may go up as high as \$100,000 in 1975. An annual Swedish International Development Agency subsidy of \$70,000 ends in 1974. The Asia Foundation has supported miscellaneous activities and the Population Council has given small project grants for publication and data processing. With UNFPA research funds becoming available in 1975 there should be no serious budgetary problems for the next few years. In the long term, the KIFP will need regular government support for operating costs.

In summary, the major strengths of the institute are good relations with the government, clearly defined objectives, a staff with potential for development, adequate facilities, and adequate financing. Its major weaknesses are lack of professional growth in evaluation and training, the lack of assured long-term financial stability, and lack of program evaluation plans, skills, and understanding.

#### Yonsei University

Yonsei University is a private entity located at Sinchon-Dong, Suhdaemoon-Ku, Seoul. It has eighteen major research institutes attached, of which this report will consider only the Center for Population and Family Planning. Yonsei has 9,382 students, 7,500 in the undergraduate program and 1,700 in the graduate program. It has 735 full-time faculty, 264 part-time faculty, 931 assistants, and 309 other employees. The total income of the university is \$2,534,000, made up of \$95,000 from the government, \$198,000 from private sources, \$168,000 came from external donors, and the remainder from student fees.

The Center for Population and Family Planning coordinates basic university activities in population. Its objectives are research in demography, family planning, and reproductive physiology, and training of personnel to work in these areas. The director is Dr. Yang, Jae Mo (currently

also dean of the College of Medicine). Policy is set by a governing council headed by the president of the university. The center has four divisions, General Affairs, Demography and Economics, Family Planning and Evaluation, and Reproductive Physiology. Its program includes teaching in population and family planning. Population courses are taught in the general education (undergraduate) program, in the College of Medicine, in the College of Nursing, in its graduate school of Education, and in the college of Commerce and Economics (for both graduate and undergraduate students).

Population-related material is built into standard courses in the College of Medicine, Department of Sociology, and the Economics Department. The main program emphasis at the graduate level is still the Masters Degree in Public Health which offers courses in bio-statistics, demography, family planning and population, and maternal and child health in its program.

Center staff is also active in work with local, governmental and international agencies, serving in various government capacities as advisors, consultants, and committee members, for family planning, statistics, and economic policy.

The center has conducted substantial research efforts beginning with the Poyang studies in the early 60's which defined the current Korean Family Planning Program, clinical testing of various contraceptives, basic research in reproductive physiology, and miscellaneous efforts in law, economics, and methodology.

Fellowships have been given to twenty-five graduate students working toward their M.P.H. degrees and to students in various fields who are interested in family planning, demography, and reproductive physiology.

Institutional development at the center has been supported by the Population Council grants and institutional support from the Council is

anticipated for the years 1975 and 1976. In addition, the center has received small grants from Korean sources and support for construction from the China Medical Board.

Center staff have their appointments in the faculty of Yonsei University and work part-time at the center. Their primary functions are in the teaching and guidance of students, and it is only in a secondary way that they work in Center activities as such.

The major strengths of the center are its varied and capable staff, the beginning of communication between population-related disciplines, its role as a consultant to government and other groups in population matters, its expanded teaching program, the integration of population activities into many areas of the university, the strong support of the university administration, and its good physical facilities.

Its weaknesses include the lack of a strong research component, its relatively weak links with the national family planning program, lack of a full-time professional staff, the relatively late start of the sociology department, and its lack of assured long-term financial support.

#### Seoul National University

The main university is located in Seoul and includes the College of Medicine, the College of Pharmacy, the College of Fine Arts, the Graduate School of Public Health, and attached medical and dental hospitals, and the Drug Research Institute. The Seoul National University ten-year plan calls for all elements of the university to move to a new campus site outside of Seoul, except for the Medical and Agricultural Colleges.

In 1973 there were 15,547 students, of whom 2,199 were graduate students. There are 1,313 full-time faculty and 180 part-time faculty. The

university's income included \$17,500,000 from the government and \$1,038,000 from fees.

There are seven major research institutes attached to the university and, in addition, a number of research institutes are attached to the individual colleges. Among the latter is the Population and Development Studies Center attached to the College of Liberal Arts and Sciences and the Institute of Reproductive Medicine and Population attached to the College of Medicine.

In addition to the major activities of the Population and Development Studies Center and the Institute of Reproductive Medicine and Population, some of the staff of the College of Education are active in population-related research, and there is substantial interest in the Graduate School of Public Administration and the College of Agriculture.

The Institute of Reproductive Medicine and Population (IRMP)

IRMP is attached to the College of Medicine and has as its objectives: biomedical research in human reproduction; application of research results to programs; dissemination of information on reproduction and population; post-graduate training in reproductive medicine. The institute's activities subsume those carried on by the Urban Population Study Center between 1964 and 1972.

Research subjects include effects of oral contraceptives on vascular and Muellerian duct systems; immuno-chemical studies on the gonadal hormone producing cells and the gonadotrophs in normal and altered hormonal status; a study of factors against family planning practice; a prospective study on lactation and postpartum amenorrhea.

The institute has been nominated as a Clinical Research Center under

the World Health Organization's expanded program of Research and Development and Research Training in Human Reproduction and received support in 1973 to participate in the world-wide collaborative clinical studies of fertility agents.

The institute has applied to the UNFPA for support for equipment and laboratory assistance, has received support for studies from the Population Council, and from the Korean government. Occasional grants from the government may be expected to continue.

IRPM has high-quality leadership, strong political support, and by virtue of its location at Seoul National University, has actual and potential influence on national policy. In common with most Korean research institutes, its long-range financial situation is insecure. It also appears to overemphasize basic research and lacks contact with other colleges and departments at the university.

#### The School of Public Health

The School of Public Health was established in 1959 with a one-year postgraduate program leading to the Master of Public Health (M.P.H.) degree. The M.P.H. course was made a two-year program in 1962 and has graduated a total of 502 persons since 1960. The major courses of the school are biostatistics, environmental health, epidemiology, health education, maternal and child health, public health administration, public health nursing, and public health nutrition. Population courses and material are included in various majors. The following courses have special population emphasis: biostatistics, human ecology, maternal and child health, public health nursing, demography, family planning and population reproductive physiology, and professional psychology.

The research activities of the School of Public Health overlap to a degree with those of the Institute of Reproductive Medicine and Population. These projects are being conducted jointly by them. A study on differential fecundability and birth intervals in the sample of married women in Korea and an operational study on mother's classes for family planning in Korea. Other projects include administrative evaluation of family planning programs, and a demographic study of the Korean population in Japan.

The dean is new and has a young faculty with a commitment to community health and a field program including family planning services. It is within the framework of this field program that additional research is underway on contraceptive practice, pregnancy wastage, and vital rates.

The school lacks a separate steady source of research funds which makes it difficult to maintain research momentum. It has received a WHO three-year institutional support grant for \$30,000 (which ends in 1974) and which was used to employ new faculty to review curriculum and to provide some staff support. The China Medical Board has helped in building the present facilities and is supporting the field work project. The Korean Institute for Family Planning has also provided support for the pregnancy wastage study.

The World Health Organization maintains two advisors at the School of Public Health and negotiations are underway with the University of Michigan for various forms of mutual exchange and assistance. The school has a good young creative faculty; it is the Public Health Training Institute for Korea and has integrated population activities into its overall program. It has a weak library and, as noted above, is financially insecure.

#### Kyungpook National University

Kyungpook National University is located in Taegu and is one of the

major provincial universities in Korea. There are 6,300 full-time students, 328 full-time faculty members, and an income of \$2,750,000 from government and from student fees.

Population-related courses are taught at the Medical College, College of Liberal Arts and Sciences, and in the Teachers College. The main population work is in the Department of Sociology and the Department of Preventive Medicine. There is no strong university commitment and no organized institutional structure to promote cooperative efforts in population. Research has been carried out by the Department of Preventive Medicine on oral contraceptive acceptability and effectiveness, integration of maternal and child health care and family planning through use of village women as maternity aides, and a field evaluation study of the copper-T intrauterine device.

The university has strong interest in rural Korea and willingness to undertake evaluation to work with the rural program. but lacks leadership, opportunity for professional growth in population, and adequate research support.

#### Demography and Related Social Sciences

Education is prized in the Republic of Korea. Getting into a college or university is a widespread goal, particularly among the urban population who comprise more than 50 percent of the total population of the country. There are three federally-sponsored national universities: Seoul National in the capital, Pusan National in the south in Pusan, the country's second largest city, and Kyungpook National in Taegu, the third city in population and located in central South Korea. Colleges of Education, Agriculture, and Engineering are attached to one or more of the government universities.

Seoul National was founded in 1946. The university has the general reputation of being Korea's leading institution for higher education. It has

the additional advantage of being located in the capital, close to the operations center of government.

Both students and faculty have at times been politically active and then have often taken positions in opposition to those of the government. The issue has not infrequently been over directives of the Ministry of Education, which has immediate control not only over the university's budget but also over programs, the number of students in separate departments, and almost every detail of operation. In this respect, however, Seoul National is simply subject to the same kinds of controls as all other colleges in the country, whether public or private. The university is to begin moving in 1974 to a new campus south of the city proper.

Kyungpook University dates from 1952. It draws its somewhat more than 6,000 students largely from Taegu and the surrounding central area of the country. There are about 325 full-time faculty, who teach in Colleges of Agriculture, Economics and Commerce, Education, Liberal Arts and Sciences, and Medicine.

Pusan National was founded in 1946 and receives a major part of its approximately 7,200 students from the city of Pusan and the southern part of the country. The major colleges are those of Business, Education, Engineering, Law and Political Science, Liberal Arts and Sciences, Medicine and Pharmacy.

Privately operated institutions at the collegiate level number around fifty. In conformity with the distribution of urban population, these are disproportionately concentrated in one city, Seoul. Many of these offer a social science population course either regularly or from time to time. Such courses are often taught by visiting staff who are full-time at other colleges and who supplement their salaries by such additional teaching. Since this is customarily arranged on a semester-to-semester basis, it is difficult to list

the schools in which a course in population is being offered at any given time. The temporary nature of the teaching arrangements also means that such a course is usually optional for students in a particular department. Students are seldom able to take courses which are not in their major departments.

Among the private schools at which one or more courses in population have been taught in recent years are the following:<sup>(1)</sup>

1. Korea University, Seoul; optional course, Demography, in the Department of Sociology; course, Vital Statistics, in the Department of Statistics;
2. Kyung Hee University, Seoul, optional course, Geography of Population, in the Department of Geography;
3. Dongguk University, Seoul; required course, Population Statistics, and optional course, Applied Demography, in the Department of Statistics; courses, Human Geography and Economic Geography, in the Department of Geography; course, Population Geography, in the Department of Sociology;
4. Ewha Woman's University, Seoul; course, Demography, in the Department of Sociology, two courses, Population Problems and Population Geography, in the Department of Social Studies; course, Population and Family Planning, in the Department of Health Education;
5. Chosun University, Kwang Joo; course, Demography, in the Department of Economics;
6. Dong-A University, Pusan; course, Demography, in the Department of Economics; course, Theory of Urban Population, Department of Municipal Planning;
7. Sung-Kyun-Kwan University, Seoul; course, Vital Statistics, in

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(1) Compiled in part from mimeographed report, Population Education in Korean Universities and Colleges, Yonsei University, Center for Population and Family Planning, no date. Received April 1974 from George Worth, Seoul.

the Department of Statistics;

8. Hong-Ik University; course, Demography, in the Department of Municipal Planning;

9. Seoul Women's College, Seoul; course, Population, in the General Education program.

10. Sookdo Women's Teachers' College; course, Population Geography, in the Department of Social Science Education, for majors in Geography;

11. Yonsei University, Seoul; course, Introduction to Demography, in the Department of Sociology; course, Population Education, in the Graduate School of Education; required course on population trends and problems for all second-year students.

In addition, courses with some population content are currently given at Yonsei University in other departments including Public Administration, Economics, Business Management, and Applied Statistics, in the general Education Division, and in the schools of Public Health, Nursing, and Law. Similarly, one or more lectures on population topics are a part of a number of courses in other colleges and universities.

The teaching of demography at the three national universities can also be summarized briefly:

1. Pusan National University, Pusan; optional course, Economic Demography, in the College of Business; course, Demography, in the College of Social Work;

2. Kyungpook National University, Taegu; required course, two semesters, Population Problems, Department of Sociology; four required courses, General Sociology, Korean Society, Development of Society, and Economic Development, all with some lectures and readings devoted to population, also

in the Department of Sociology;<sup>(2)</sup> and

3. Seoul National University, Seoul; required undergraduate course, Population Problems, and course, Population Analysis, in the Department of Sociology; graduate seminars on varying population subjects, given for Masters degree students in Sociology and other departments through the Population and Development Studies Center (see below); two required courses, Population and Family Planning and Population Statistics, for students in the M.D. program; two required courses, Population Problems and Population Statistics, for M.P.H. students, College of Medicine; three optional courses, Introduction to Biostatistics, Introduction to Demography, Family Planning and Population Problems, for M.P.H. students, Department of Biostatistics, School of Public Health;<sup>(3)</sup> courses in rural sociology and agricultural economics which include the study of rural populations, College of Agriculture (located in Suwon); and course, Population Geography, in the Department of Geography.

#### Population Research Centers

##### Population and Development Studies Center, Seoul National University

Population research began informally within the Department of Sociology in 1964, following the return of a senior faculty member who had studied under a Population Council Fellowship and had received an M.A. degree in demography from Pennsylvania. A Population Studies Center was organized in 1966. Two years later, as its research program expanded, this was reorganized as the Population and Development Studies Center. The change in name reflected

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(2) Economic Commission for Asia and the Far East, Research, Teaching and Training in Demography (New York: United Nations, 1972), p.272.

(3) ibid., p 276-280.

an increasing awareness on the part of the staff of the close and reciprocal relationships between population and various aspects of development. It was also designed to broaden the number of departments and outside organizations that would have an active involvement in the research program. Major support for the center was provided by the Population Council.

The center has two basic activities, research and graduate training. In support of the second, five or six fellowships are awarded each year to students seeking Masters degrees in any department where their major focus can be on some aspect of population and development. In fact, the majority are studying in sociology, but some come from other diverse areas, including economics, mathematics, city and regional planning, anthropology and public health, and one or two have come from outside the university. Degrees are awarded by their respective departments. Many of the graduates of the program are now working actively in population fields in Korea or abroad or are engaged in doctoral study.

In addition to research and training the center has held monthly seminars since December 1970 at which research results are presented to staff, students, and any other interested persons. It has also organized an annual conference on a topic of national importance which has involved the faculty of other schools and officials of the Economic Planning Board, the Ministry of Health and Social Affairs, and various other government organizations. The conference held in 1974 deals with the relationships between population and development. It is to be broad in scope in honor of the World Population Year and will have participants from a number of countries. The Asian Studies Committee of the Social Science Research Council (U.S.A.) is serving as co-sponsor.

Conference papers and seminar reports have been published regularly in a series which has as its main component the results of research studies carried on at the center by both regular and visiting staff. Since 1971 a journal has been issued twice a year which carries both articles and bibliographies of significant population and development research appearing during the previous year.

A library of around 2,500 volumes is open to all scholars and students working in the subject areas covered, demography, population studies, economic development, sociology, and statistics. This is the best collection of population materials and of population data on Korea available in the country. It also includes a valuable historical collection of books and journals, the former library of Stuart Rice, one of the pioneers in social science methodology.

The first research undertaking of the center was a field survey of household composition, fertility behavior and attitudes toward family planning in a large semi-rural town. A resurvey of the same community to study changes since the initial observations were made in 1964 is the latest project, in 1974. Other completed research has focused on Korean fertility trends, urbanization and migration, economic growth and social change, labor force, land utilization and the quality of Korean population statistics. In addition, the center has completed two monograph series, based on the 1960 and the 1966 censuses of population. Many studies have been financed by limited discretionary research funds.

A problem that has faced the center since its organization is that of staffing. It is not a formal part of the university, a lack of status it shares with all but one or two of the many centers and institutes on the campus. It therefore has no permanent positions of its own and must make use of members

of regular university departments who share its interests. At present both the director and assistant director are permanent members of the sociology faculty. In addition, there are research associates who are staff members of other departments. Grant funds have enabled the center to bring two Korean demographers from their positions in the United States and in Canada for three to seven months for each of the past five years. One of these has a Ph.D. in demography from Pennsylvania, the other a Princeton Ph.D. in sociology with a concentration in demography. The assistant director received a doctoral degree in demography from Australian National University. Members of departments with related interests also serve as research associates. This has worked well so far and has made it unnecessary to provide the services of an expatriate advisor. Nevertheless, there is a need to develop a larger permanent core staff.

Center for Population and Family Planning, Yonsei University

Yonsei is generally viewed as the outstanding private university in Korea. For more than ten years there has been interest and activity in its College of Medicine in training, research and service in family planning and related population problems. In particular, this has reflected the interests of one man, a medical doctor with an M.P.H. degree from Michigan. He has also headed the Korean Planned Parenthood Federation, which has been an important instrument for implementing the government's policy to reduce rates of population growth. He was instrumental in organizing the Center for Population and Family Planning at Yonsei in 1968. Although this was viewed from the start as a multidisciplinary organization, its operations were largely oriented to preventive medicine and to obstetrics and gynecology in the first years. With support from the Population Council a reorganization occurred in 1971, and there are now four divisions in the center. The Division of General Affairs is responsible for overall administration under the director (the man described above) and the executive committee.

The other divisions are those of Family Planning and Evaluation, Reproductive Physiology and Demography and Economics. The head of the latter is also the director of the Institute of East-West Studies on the campus. (At the institute he is the principal investigator for a pilot study of population trends and policies in the People's Democratic Republic of Korea (North Korea) underway in 1974.) He is an economist with an American Ph.D. and six months' training in demography at Hawaii. There is also an associate head, with a Ph.D. from Berkeley, and some research staff.

A Department of Sociology was authorized by the Ministry of Education in 1971 and has begun receiving students. Its head holds a Ph.D. in Sociology-Demography from Chicago. There are also competent and interested faculty in other social science areas, including economics, law and political administration, who are research associates of the center. Their presence has been slow in making itself felt, however, with only two small studies completed in the social sciences. This reflects the newness of the operation and the fact that the professional research staff are all members of departments in which they have full-time teaching and administrative obligations. In addition, their major interests are mostly in topics other than population. There is a clear need for a greater proportion of the research staff to have specific demographic training. The current core support grant from the Population Council does provide for several man-years of such training. In addition a second sociologist-demographer is presently studying for his Ph.D. in the United States. Therefore there is a good potential here for future research despite the somewhat limited accomplishment until now. But it continues to be doubtful that the center's research will be interdisciplinary in character even within the Division of Demography and Economics. So far the representatives of separate disciplines have shown a strong tendency to work independently, and any assessment of the accomplishments of the social science

component must be deferred.

Institute of Population Problems

The institute is an independent, non-profit, semi-governmental corporation. It is not affiliated with any university or other government agency. It has quite small quarters (a work room, a library, and a couple of offices) in a center-city commercial building. For nearly a decade it has led a marginal existence, supported by government contracts for specific population research, by small Foundation Council grants for translations and publications, and by membership dues and gifts collected from Korean business organizations. The permanent staff consists of the president, a one-time professor of sociology, a translator-research associate, who has an American Ph.D. in sociology, and a secretary. When research contracts are signed, additional workers are hired for that particular piece of work.

The institute's contract research has resulted in reports to the sponsoring agency rather than generally circulated studies although some of the studies have led to articles in a population journal put out by the institute. Contract work has mainly involved population projections, fertility trends, and evaluations of family planning. For example, a contract signed with the Economic Planning Board called for an estimation of fertility levels in Korea. Another study related to the use of mass communication to diffuse knowledge of family planning and induced abortion in rural areas. Recently the Bureau of Statistics and the institute agreed to cooperate on a 1970 Population Census monograph series, subject to outside funding.

A principal contribution of the institute to population efforts in Korea has been through its translation and publications program. For a number of years there has been an annual translation into Korean of an important single book or of selections from various sources. In addition, the journal,

Population Problems, has been published continuously, with many of the articles written at the institute. Both the annual volume of translated material and the journal are distributed without charge to all colleges and universities in the country, to many government offices, and to selected institutions abroad. In this way the institute provides useful materials for teaching and research done elsewhere and communicates research findings to teachers, government officials, and other research workers.

Other organizations

The three centers above are all that focus on population research. Brief mention can be made of some additional organizations that occasionally carry out population studies.

The Bureau of Statistics, within the Economic Planning Board, is responsible for taking and tabulating the quinquennial censuses of population and housing. There is a Population Division and within that a Population Census Section, the head of which came to the U.S. Bureau of the Census for study in 1971. The bureau is an operating organization and as such does not conduct research itself. It has made some population projections and is currently prepared to cooperate with the Institute of Population Problems on the 1970 census monograph series if outside funding is obtained.

The Korean Institute for Research in the Behavioral Sciences is an independent, non-profit research organization not directly affiliated with any university or government agency. Informally, however, it enjoys close contact with both, partly because its top professional staff is composed of academic persons. The director (and founder) is dean of the College of Education at Seoul National University. The large staff numbers almost 100 persons, about half of whom hold master's or doctoral degrees.

KIRBS has acquired a reputation for good work in its field of

principal interest and activity, education and educational testing. In the population field it has completed a behavioral study of son preference in Korea under a grant from the Population Council. Other studies are to appear in one of the institute's several serial publications, Psychological Studies in Population Family Planning. Besides its research, the organization is involved in training, seminars, and consultation.

In addition to work under the auspices of these formal organizations, a number of research studies have been carried out by individual scholars at schools where there are no organized research institutes. Illustrative are a project on the impact of population growth on the Korean economy by a member of the Economics Department at Hong-ik University and a study of the patterns of migration and residence of movers to Seoul and the characteristics of migrant households by length of time since the original move to the city, completed by a sociologist at Seoul Women's College.

#### IV. CONCLUSIONS

The Republic of Korea was one of the first countries in Asia to adopt a population policy and to establish family planning as a means of reducing rates of population increase. The latter were estimated to be around 3.0 percent annually in 1960. In the twelve years since 1961, when the government announced its intention to cut the growth rate, fertility has declined to close to 2.0 percent. It is logical to credit the efforts of the government program for a part of this success, particularly since fertility levels appear to have remained high in the years before government sanctions. How much credit to give is debatable. Here it need only be reiterated that population events occur in a social and economic context and that both the economy and society of the country experienced rapid social change during the 1960's and early 1970's. Economic

growth rates have been substantial, even phenomenal, exceeding 10 percent in several years while much lower population growth rates declined. Though still serious, runaway inflation was halted. Over half the population was classified as urban at the end of the decade of the 1960's. Primary schooling was nearly universal and over 90 percent of the people at all ages combined were literate. If not always popular, government has been comparatively stable. Mean age at marriage increased noticeably for both men and women. In sum, the country was undergoing modernization and development, and some of the benefits at least were distributed to ordinary citizens. Many and serious problems remained, but except for those social problems made more visible in the larger cities, they tended to become less apparent.

During the period government planners were extremely active. In general, they were concerned with industrial development, technological growth, and other "practical problems." Factories had to be built, roads constructed, cities expanded, foreign trade opened, vocational and technical training emphasized. Rapid population growth was recognized by the planners as an impediment to their goals and accepted as such by the highest officials. "The population problem" was dealt with by vigorously endorsing family planning and simultaneously providing family planning services. More than was realistic, the view dominated that, as such services were expended, the population problem would be solved. One consequence was a neglect of the non-program research and training in population that is needed to give support to the continuing and consequential multiple effects of population factors on development and modernization. The uses to which demographic research and persons with population skills can be put do not yet appear to be well understood in Korea.

An important consequence is that government support for the centers that would train manpower and provide research results has been minimal. The

development of population experts has been left to foreign agencies providing fellowships for training abroad. The need to provide attractive opportunities for those with such skills to return to Korea and use them has not been sufficiently recognized. Good population data--one essential in the development process--have not been demanded or developed. Again, the surveys that have produced improved fertility and mortality data in the absence of a reliable vital registration system have been largely initiated and funded from abroad. The low status of the Bureau of Statistics, even in comparison with other government agencies, is a good index of the lack of demand for its product.

All this is understandable. The needs of any country undergoing development are great. But it appears that what is needed now is an understanding of what demographic competence has to contribute toward meeting increasing and diversified development goals and a translation of that understanding into investment by government for its university and other population research and training centers. Such an investment will be modest in won amounts. It will pay for itself, or even if, as all hope, Korea achieves low fertility quickly through the kind of modernization which occurred in Japan.

#### SOURCES OF DATA

Site visits by T. R. Whitney and G.C. Worth, March-April 1974.

April 1974

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PHILIPPINES

Grandy N. Talavera and Vincent Whitney

1. COUNTRY SETTING

The population has grown rapidly since 1900, especially after World War II, and has exceeded 70 million in 1973. The growth rate is 1.0 to 1.2 percent per year. Migration is negligible. However, a large number of young adults are moving from rural areas to crowded cities. The population is young in structure, more than half being under 15 years. It also has a high dependency ratio. The average completed family size is about six children. Selected demographic, social, and economic characteristics follow:

Population (in millions)	
1972 estimate	39.1
1975 projection	64.0
Rate per 1,000 population (1974)	
Births	42-45
Deaths	11-13
Natural increase	30-34
Percent distribution of population by age	
All ages	100
Under 15 years	43
15-64 years	53
65 years and over	4
(Year)	(1970)
Dependency ratio	88
Females aged 15-44 (1972 estimate in millions)	
Total	8
Married	5

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\*Source: Dorothy Nortman, "Population and Family Planning Programs: A Fact book." Reports on Population/Family Planning, Population Council, 1973.

Density (1972 population/sq.km)	130
Percent urban of total population	
1970	34
1985 (projected)	41
Percent literate	
Male	85
Female	82
(Year)	(1970)
(Age group)	(10+)
Percent of eligible age group in school	
(Primary school age group)	(7-12)
Male	87
Female	86
(Secondary school age group)	(13-16)
Male	42
Female	42
(Year)	(1967)
Population (in thousands)	
Per physician	2.8
Per nurse	2.2
Per midwife	u
Per hospital bed	0.9
(Year)	(1970)
Gross domestic product (GDP)	
Per capita in US\$ (1970 or 1971)	257
Percent derived from agriculture (recent year)	30
Annual percent increase in real GDP	
Total	4.8
Per capita	1.2
(Years)	(1965-70)
Per capita food production, 1969-71 average index (1959-61 = 100)	98

## II. HEALTH POLICY AND PROGRAMS

The Four-Year Health Development Plan (1974-77) objectives include control of communicable diseases provision of health services to rural populations, a maternal and child health program, promotive and preventive health programs for the working population, control of drug abuse and rehabilitation

of dependence, and limitation of population growth through an effective family planning program. It calls for increased budgets, strengthening of rural health units, a national birth control program, and a national family planning program.

#### III. TRAINING OF PERSONNEL

Family planning services programs were started in the 1960's. In 1967 the Institute of Social and Child Health established a National Training Center for Maternal Health Services. In 1968 the Project Office for Maternal and Child Health was created in the Department of Health as the first official involvement in family planning.

In 1970, Commission on Demography was created by President Marcos. The Population Act of 1971 established a national policy on population. A presidential decree in 1972 revised the act, setting out its objectives as making family planning a part of a broad educational program, and making available all acceptable methods of contraception except abortion. The decree provided operating funds for the commission.

Policy includes involvement of the Department of Education and Culture, through inclusion of family planning training in medicine, nursing, midwifery, allied medical professions and social work, and through population education.

#### IV. INSTITUTIONAL DATA

In 1971 the Commission on Population, in cooperation with the National Economic Council and USMIB, entered into a project with the Association of Philippine Medical Colleges to integrate population dynamics and family planning in the medical curriculum. The program involved demonstration clinics, health centers, and faculty coordinators. Funds were made available for clinic

construction, salaries, and limited supplies.

The University of the Philippines, College of Medicine

This school is considered the most prestigious of the medical schools. It was founded in 1907 and is located in Ermita, Manila. The faculty numbers 380 -- 35 percent full-time and 65 percent part-time. The student body averaged about 450 a year from 1970 to 1973. Only 100 to 110 students are admitted each year.

The curriculum, as in all other medical schools, is similar to the American system. The first two years are devoted to basic sciences and the last two to clinical subjects. Public health is included in the basic science curriculum, and the practicum in community medicine is given in the fourth year at both an urban and a rural comprehensive health care program. Graduates of all medical schools are required to do a one-year internship in any accredited training hospital. Since 1973, medical graduates waiting for the results of the medical board examination have been assigned by the Health Department to rural areas to augment the medical personnel in places where they are most needed and where they stay for six months. The government pays them a small living allowance of p300.00 (US\$44.00) per month.

The college has ongoing teaching and research activities in population and family planning. Training activities are undertaken by the school under two programs of the Department of Obstetrics -- the Research Laboratory for Reproductive Medicine, headed by Dr. Gloria Aragon, and the Reproductive Biology Center, headed by Dr. Ruben Apelo. The Research Laboratory trains technologists in cytology of the cervix and is actively engaged in research in the cytology of the cervix among pill users, and hormonal studies in pill users.

The Reproductive Biology Center trains medical students, residents of the teaching hospital, and medical practitioners desiring training. Dr. Apelo's center runs the clinical family planning services in a building behind the out-patient department, in addition to a postpartum family planning service in the obstetric ward of the Philippine General Hospital and a clinic at the Fabella Memorial Hospital some three to four miles north of the college. These clinics are well-equipped with excellent physical facilities. Both are utilized for clinical training of medical students and others. There are provincial clinics in Bay, Laguna; Tacloban, Leyte; Tuguegarao, Cagayan; Calasiao, Pangasinan; and Bacolod, Occidental Negros, which are purely service clinics.

The center conducts field testing of various contraceptives such as depo-provera, megestrol acetate, copper-T, copper-7, LEM, Dalkon shield, fluid filled device, vaginal ring, and some injectables. Dr. Rebecca Ramos is doing research on abortions. The center is also doing studies on hysteroscopy and female sterilization using various methods such as the Hulka clip and cauterization.

The clinical and training facilities of the Reproductive Biology Center are open to observers, students, and trainees from WHO, schools of nursing, interns and residents of other hospitals, midwifery students from the Fabella Memorial Hospital School of Midwifery, and the Department of Health training office.

The teaching facilities of the College of Medicine are very good. There is one air-conditioned lecture room that seats 200 students comfortably and another lecture room with a capacity of about 100. Both have provisions for audiovisual teaching. Many other smaller classrooms can be used for audiovisual

purposes. Teaching equipment is available. The library has about 35,000 volumes including bound periodicals. The medical students also have access to the library of the Institute of Public Health, which is just adjacent to the Medical College.

The senior faculty engaged in the teaching of family planning are well-known and well respected within the school, university, and community. They are often invited as consultants or lecturers by other training institutions, nursing schools, workshops, and seminars. The interest in family planning is highest in the Department of Obstetrics where the leadership emanates. Dr. Ruben Apelo and Dr. Gloria Aragon have gained both national and international recognition. Both provide guidance to the junior staff and allow the latter freedom to express their innovative ideas and their creativity, resulting in good morale of the staff.

The funding for teaching, research, and training comes through the Population Commission as follows:

Reproductive Biology Center -- The Population Council, USAID, IPPF.

Integrated Teaching -- POPCOM, National Economic Development Authority (NEDA).

Research Laboratory for Reproductive Medicine -- POPCOM, USAID.

The faculty directly involved are those in physiology, anatomy, pharmacology, public health, psychiatry, obstetrics, and pediatrics. The service training and research programs have professional as well as support staff.

The college has a very good faculty and provides high quality education. It has strong leadership from the Obstetrical Department and offers rich clinical opportunities for students to develop skills in contraceptive

technology. There is a need, however, to appoint a family planning coordinator who can pull together the family planning content in an organized, less repetitive fashion and who can command the respect of senior faculty. Perhaps a professorial chair in family planning with the responsibility of coordinating all family planning teaching would be more appropriate. The problem is funding.

University of Sto. Tomas, Faculty of Medicine and Surgery

The Faculty was founded in 1871 and is located on the original campus of the Catholic University of the Philippines on España Street, Manila. The faculty consists of 206 members, 30 percent full-time and the rest part-time. The student body is about 1,350 with approximately half being females. The school has a rural community socio-medical center which was established in 1972 in a squatter relocation center in Sapang Palay, San Jose, Bulacan, twenty-five miles north of Manila. Its activities include preventive medicine, maternal and child health, nutrition, community development, responsible parenthood, and birth regulation. Family planning advice is limited to the rhythm method. Inquiries on other contraceptive means are referred to government clinics in the surrounding zones. Socio-medical and family planning activities are also provided at an urban clinic in San Francisco del Monte.

Population/Family Planning was integrated in existing courses in 1972. From 1968 to 1972, second year students had already been required to take a course on human sexuality for one semester, two hours per week. In 1972 a family planning coordinator was appointed. Objectives are well defined, but the thrust is on information and motivation. The content permeates many courses from first to fourth year. The moral aspects of family planning are included in Medical Ethics.

The teaching program is very rich in the moral aspects of parenthood and sexual behavior; contraception is, therefore, biased in favor of natural methods of regulating births.

University of the East, Ramon Magsaysay Memorial Medical Center

The College of Medicine opened in 1956 and is a nonprofit affiliate of the University of the East. It has a faculty of 196 (104 full-time and 92 part-time) and a student body of around 850. Clinical teaching is provided mainly by the 200 bed UERM Hospital Annex (charity), 119 bed Pay Hospital, the out-patient clinics, and is enriched by affiliation with four government hospitals. For community medicine, there is a rural community health project and an urban health project. Since 1972 a four-week community medicine program has been required for all fourth year students. The urban and rural teaching areas were utilized for this purpose.

The medical library is fully air-conditioned and occupies one floor of the Medical Research Center building. It has 16,948 volumes and receives 280 periodicals. An audiovisual center is located in the same building.

Since 1967-68, population and family planning have been integrated in the teaching of all courses from first year to fourth year. Students at the fourth year level get field experience in motivational activities in the rural and urban teaching areas. Clinical practice in contraception is provided at the extramural training centers as well as in the family planning clinic in the outpatient department.

In the rural clinic, students are exposed to family planning motivational activities. Provision of contraceptives services is limited because of the small number of acceptors.

There is no on-going research in family planning. There are no major plans for activities outside of re-examination of the course objectives and improvement of the teaching with increase in clinical exposure of the students.

The teaching program in family planning is well organized. Leadership is firm and any one of a number of leaders can take charge of continuing the program at its present quality. The dean, Dr. Elena Guyoukeng, provides a firm yet friendly guidance.

Far Eastern University. Dr. Nicanor Reyes Medical Foundation.

Institute of Medicine

This medical school was founded in 1952 and is located on Morayta Street. It has a faculty of 177 -- 71 full-time and 106 part-time -- and a student body of approximately 1,200. Every year it admits 275 to 300 students and graduates 200. The school has adequate teaching facilities including a large library with 11,000 medical volumes and an excellent audiovisual center.

Long before the institute integrated family planning in its courses, Dr. Fe del Mundo, an eminent pediatrician, who was then chairman of the Department of Pediatrics, included family planning in the teaching of pediatrics and child health. She operated family planning clinics in puericulture clinics in Marinduque where students from the Institute of Medicine were sent on rotation.

The medical school has set up an active teaching program consisting of theoretical teaching during the first two years, field experience added during the third and fourth year, and clinical experience for fourth year and interns. A family planning coordinator takes charge of implementing the program. The students practice skills in motivating couples in the urban

extension health center community. A well-equipped family planning clinic was built at the out-patient department and is being utilized as both a service and teaching clinic for interns and clinical clerks. Like the University of the Philippines, College of Medicine, all methods of contraception including sterilization are available. The Institute has extended its teaching services to the rest of the university and holds seminars for faculty and students of other units.

There is no research underway. There are plans to carry on a follow-up study of clinic contraceptive acceptors with the assistance of the Institute of Nursing of the Medical Center.

The Pathfinder Fund made a grant of \$22,647 for the period January to December 1974 for a sterilization program. The institute also receives \$4,400 a year subsidy from the Philippine Charity Sweepstakes to support the urban health center program.

The school plans to: (1) extend sterilization services to the squatter relocation sites, (2) set up a model teaching program in community health including family planning, and (3) train staff of other hospitals in techniques of sterilization. For this plan the institute needs funds to build an operating room.

The population/family planning program is a very good one with dedicated and intelligent leadership and a high potential for becoming a model teaching institute.

#### The Cebu Institute of Medicine

The Cebu Institute of Medicine was founded in 1957 by Dr. Jacinto Velez with a small group of associates who composed the first faculty. It is located in Cebu City on the Island of Cebu in the Visayas region. It

has a faculty of 156, of which 83 are full-time. The student body of 700 is mostly from the Visayas and Mindanao region. Of 200 entering freshmen, 150 graduate.

The physical plant itself is good and located in the center of Cebu City. There is also a rural teaching complex. There are adequate classrooms and an air-conditioned auditorium with a seating capacity of 250 which the medical school shares with the schools of nursing and medical technology. Audiovisual equipment is adequate. The Population Commission's regional office is located in Cebu City and lends equipment, films, and other audiovisual materials to the school. The library is small, poorly equipped, and has only 2,000 volumes. The books on population/family planning are poorly selected. The faculty teaching population/family planning rarely utilize the library and depend largely on their own collections of materials.

The four-year curriculum follows the pattern seen in other schools, but CIM has introduced innovations in the field of community health to an extent that it has attracted visitors not only from other schools in the Philippines but also observers from other countries.

The Cebu Institute of Medicine opened its community medicine program in 1967 to provide an actual setting for the translation of classroom and hospital-acquired knowledge to the community. To date, the CIM Community Medico-Social Services has organized four barrios in Liloan, two in Consolacion as RHU based Community Medicine; and one barrio in Naga and one in Lapulapu City as Hospital based Community Medicine; and the barrios of OPRRA and San Miguel within the Ponce Compound for urban Community Medicine. Pakna-an CMSS is the center of all operations and services.

Population/family planning is taught at each year level. CIM gets assistance from other agencies in the form of teaching aids from the Population Commission, samples of contraceptives from a drug company, and teaching materials from the local chapter of the voluntary Family Planning Organization of the Philippines. The faculty involved in the teaching at the second and 3rd year consists of two members from each of five departments -- microbiology, pharmacology, general pathology, clinical pathology, and physical diagnosis.

At the third and fourth year, the faculty involved are in preventive medicine, pediatrics, obstetrics and surgery. A family planning coordinator is in charge of the program in the field and in social and preventive medicine. At the fourth year, field practice is given at the Pakna-an rural community center, at an urban area where 400 families from the city slums have been relocated, and at a slum area -- the Ponce Compound with 2,000 population. In the field the student is required to motivate at least five couples to accept contraception and to bring one acceptor to the clinic.

Students, under the guidance of the family planning coordinator, conduct simple studies on such questions as, "Why is the intrauterine device poorly accepted in Pakna-an?" No research is underway.

Southwestern University, Matias Aznar Memorial

College of Medicine

The Southwestern University College of Medicine was founded in 1946, the first medical school in Cebu City. It has a faculty of 138, 70 of whom are full-time. It has a student body of 986, most of whom come from Visayas and Mindanao.

The classrooms and a 200-seat auditorium are adequate, but the

laboratory facilities are good for only about 100 students. The school will reduce admissions to this number starting next school year. The school has a beautifully furnished, air-conditioned library with only 6,000 volumes. The population/family planning collection is inadequate. Audiovisual equipment, though shared with other university units, is sufficient for their present needs.

The curriculum follows that of other medical schools.

This is the only school with a separate Department of Family Planning. It was established in 1969 by the present chairman, who is owner of the school. The development of the family planning program overshadows all other teaching areas and departments. There is a family planning service clinic in the Department of Family Planning which offers vasectomy, all kinds of contraceptives, and even menstrual regulation. Culdoscopy sterilization is available at the teaching hospital on campus. The department has laboratory services for PAP smear, and guidance and counselling services. The physical facilities are good and the department faculty highly motivated in teaching and research, but there is a lack of teaching materials.

The department has seventeen faculty members including the new dean. Teaching is integrated in the existing courses at the first and second year. In the third year a separate subject in family planning is given two hours a week for two semesters. Faculty are invited from the Departments of Obstetrics, Pediatrics, Nutrition, and Legal Medicine.

A ten-hour field experience in information and motivation work is provided at a family welfare clinic in the urban area. In the fourth year fifteen days are spent on purely clinical work in the Department of Family Planning clinic. The students also do family planning activities in their

community medicine course in a rural setting in Argao, and a family planning clinic in Lamacan, Cebu.

The leadership is from the chairman of the Department of Family Planning. The faculty form a well motivated team that has succeeded in continuing an active teaching program. It is the only program that requires medical students to insert IUD's to complete the course. Research is being conducted on sterilization and on menstrual regulation. A field service survey of knowledge, attitudes, and practices of families in the area around the school was started eight months ago.

The school has a poor reputation as an educational institution and tends to attract medicare students. The teaching and service program in the school, however, is a very courageous one. It is the only school or agency that has ventured into menstrual regulation. The leader is an indefatigable go-getter, and with the help of her department faculty may be able to reach the objectives which the department has set: (1) to be a training ground of the medical students, graduates, and other allied professions, (2) to disseminate information about family planning, (3) to offer clinical information about family planning, and (4) to conduct researches on family planning.

The Manila Central University, Dr. Filemon Tanchoco

Senior Memorial Medical Foundation

This college, which is located in Caloocan City on the northern edge of Manila, was founded in 1947. It has a faculty of 88, of whom one-fifth are full-time. The student body numbers 900. The school admits 200 students to the first year, but plans to reduce admissions to 100 next school year. Graduates seldom pass the ECFMG and are ineligible for work in foreign

medical centers. For this reason many enter the public health service or practice in the country. A significant proportion of country doctors are graduates of the school. The curriculum is similar to that of the other schools. This is the only school that does not have a rural community health teaching area. Students are sent for four weeks to the health centers of Caloocan City Health Department for community health practice. There are enough classroom facilities for 100 students but the library is very inadequate, with only 4,000 volumes and practically no materials on population/family planning.

No formally-organized efforts have been made to include population and family planning in the existing courses. Some faculty members, however, on individual initiative, include family planning content in their teaching. In 1973 a new dean was appointed and a family planning committee will draw up a new curriculum.

Implementation of an integrated teaching program will start this June and will include first to fourth year students. A seminar for faculty on the teaching of family planning is planned before school starts. An out-patient department family planning clinic, which is run by the Institute of Maternal and Child Health, will be utilized for training of students. The dean is now negotiating to set up a rural community training center.

In general, the morale of the faculty is low. The young faculty are optimistic about improving the academic standards of the school because of the new leadership from the office of the dean. The present dean has been given a free hand by the owners and Board of Directors to upgrade the quality of instruction and change the image of the college.

Institute of Public Health, University of the Philippines

The Institute of Public Health, originally called the Institute of Hygiene, was established in 1927 for the training of medical officers in the Philippine Health Service. The institute was organized with the Department of Hygiene of the College of Medicine forming its nucleus. In 1932, with assistance from the Rockefeller Foundation, the institute moved to its own and present building. While it is a university unit with its own dean, it still serves as a Department of Preventive Medicine and Public Health of the medical school. The institute has been able to expand its facilities, develop its staff by a faculty exchange program with Johns Hopkins School of Public Health, and improve and secure laboratory and teaching equipment over the years with outside help.

Beginning in 1949, graduates in dentistry, veterinary medicine, engineering, pharmacy, nursing and education were admitted, in addition to medical graduates, into the Certificate or Master's in Public Health program. Since 1951, an undergraduate course leading to the degree of Bachelor of Science in Hygiene has been offered. A graduate is a well-rounded medical technologist who is fairly knowledgeable in bacteriology, parasitology, environmental health, and vital statistics. The school also offers courses leading to Master or Certificate in Hospital Administration, Master of Public Health Engineering, and Master of Science in Hygiene. Two years ago the Certificate program in public health was abolished.

The physical plant is a four-story concrete building with air-conditioned lecture rooms, auditorium, classrooms, and faculty laboratories. It has two well-equipped biological laboratories and one environmental health laboratory. The biostatistics and epidemiology laboratory is in the process of replacing some of the calculators for students and acquiring electronic ones.

Audiovisual equipment is centralized and maintained by a technician who also prepares slides and other teaching materials. The library is spacious and has 11,410 volumes and 334 journal titles with a good family planning collection.

There are forty-five full-time faculty members and only one part-time member. All have either doctoral or master's degrees. Many of the senior faculty have gained national as well as international recognition in research or teaching. With very few exceptions, the faculty members are highly motivated, diligent, and creative. Dr. Trinidad Osteria and Dr. Amanda V. Valenzuela are Population Council Fellows.

The students in the graduate courses average a total of seventy, in the undergraduate program an average of fifty a year. All the graduate programs leading to a master's degree require a minimum of thirty academic units and can usually be completed by the student in four quarters of the school year. A weighted average of at least 2.0 or better is required for graduation.

The Master of Public Health curriculum includes fifteen units of required courses. Electives are offered in the different Departments of Public Health Administration, Public Health Engineering, Microbiology, Parasitology, Biostatistics and Epidemiology, and Public Health Nutrition. The Hospital Administration program has twenty-five units of core subjects.

Courses in family planning are offered as electives to all students, and population/family planning has been integrated in other courses.

The school was soon involved in organizing and conducting teaching seminars for different groups of workers. With a grant of \$50,000 for 1971 to 1973 from WHO, the institute conducted seminars for school physicians and

medical staff of government training hospitals with maternity centered family planning services, renovated and expanded offices and classrooms for family planning, and recruited two faculty into the family planning program.

Several research proposals have been submitted to IPPF and WHO, including a study of abortions in Philippine hospitals, testing of the randomized response technique on Filipino mothers to elicit information on abortions, psychological studies on vasectomy acceptors, sibling order and academic performance of high school students, and breastfeeding and the health of the mother and child, and contraception.

Visitors will see evidence of substantial progress and that persons involved are continuing their interest in improving the teaching of population/family planning courses and in seeking answers to problems of administration, abortions, and effects of sterilization and contraception on men and women acceptors.

In 1971 the Department of Health asked WHO to help improve teaching of family planning, population dynamics, and human reproduction in nursing and midwifery schools in the country. Nursing schools and midwifery schools all over the country were invited to participate in a series of workshops; fifty-nine out of eighty-eight nursing schools and colleges, and twenty out of thirty-six midwifery schools, have participated and a core of educators have been trained to prepare colleagues to integrate family planning in the nursing curriculum.

All the schools are included in the WHO-assisted program and will receive training for selected faculty and teaching materials and equipment. A guide for teaching has been developed, based on the workshop reports, and has been distributed to all participating schools. The schools that have

is fifteen miles from downtown Manila. In the last decade or two the university has placed particular emphasis on expanding its traditional teaching function to the graduate level and in developing research institutes and activities to complement its teaching services. The university is generally accepted as preeminent in the country. Its graduates occupy far more positions of leadership in government and private enterprise than do those of any other school.

There are now about 23,000 students enrolled, of whom nearly 20,000 are undergraduates. To train them there were 2,568 full-time and 511 part-time faculty in 1972-73. In addition to the 29 academic units, which in 1969 offered some 95 baccalaureate degree programs, there were 66 master's programs and 19 leading to the Ph.D. degree. At the sixty-first commencement in 1972, 480 graduate degrees were conferred. Most of these were master's degrees, but four were doctorates, two in philosophy and two in education. The number of doctorates is small and varies from year to year to a maximum of about ten. At one time the faculty included a sizeable group of expatriates, particularly Americans, but it is now largely Filipino. Most of these were once undergraduate students at the university. About half have taken all or part of their graduate study abroad, principally in the United States or Europe.

The Population Institute is the principal center for demographic training and research at the university. Founded in 1964, the institute offers a two-year graduate training program leading to the M.A. degree in demography. Its graduate students and its staff are both involved in population research, primarily field surveys. Finally, the institute provides consultation and technical assistance to other university departments and to a

variety of government agencies. Support for its programs comes from several sources, among them the university, the Ford Foundation, USAID, the International Development Research Center, the Population Council, and the University of Chicago.

In line with practice in other university institutes, the direction of the UPPI is in the hands of a dean. She holds a doctorate in sociology, with specialization in demography, from the University of Chicago. The dean has the faculty title of Professor of Statistics and Demography. The remaining Filipino members of the staff are four instructors, who are also second-year graduate students, and two other instructors who are currently studying at Johns Hopkins and Harvard. In addition, one assistant professor, who holds a Ph.D. from Chicago in Sociology (Demography) is on leave of absence and is reported unlikely to return. Finally, there are three Americans (as of February 1974) who are visiting for terms of one to three years. One holds a Ph.D in Sociology (Demography) from Chicago, one has a Ph.D. in History from Wisconsin, plus two years of post-doctoral study in demography (one at Pennsylvania and one at Johns Hopkins), and the third has a master's degree in Public Health from Hawaii. Their services have been provided by the Ford Foundation, USAID, and the Population Council, respectively. Professor Philip Hauser, Director of the Population Research and Training Center at the University of Chicago, has served as a visiting consultant to the institute for a number of years. Although the institute has been in operation for some ten years, it has not been able to build and retain a permanent professional staff with seniority and experience. The dean, who is an exception, has noted this in her 1972-73 report and has attributed this to better salaries and higher rank available in other agencies or in other departments of the university.

The master's training program calls for the completion of twenty-four hours of course work plus a thesis. The courses currently offered in demography are: Demographic Statistics (required), Population Studies (required), the Demography of Asia, Population Growth and Economic Development, Demographic Aspects of the Work Force, Computer Applications in Demography, Population Program Evaluation, and Special Topics in Demography.

Two other courses listed in other departments are also required. These are Demography and Statistics for the Behavioral Sciences. A student may choose his remaining courses from a list of thirty-four offered by other departments or institutes, ranging from anthropology to family planning or statistics. There is also a five-week in-service training program for government workers and faculty members in other departments or universities. This program centers on demographic data and techniques and on the relationships between population and economic development.

1972-73 five students passed their comprehensive exams, given at the end of the first year of study, and two received M.A. degrees in demography. During the year seven entering students received full fellowships and others were given a tuition scholarship and a book allowance. Despite the fact that the UPPI would appear to be an important training asset for students from many countries in South and East Asia, all regular students in the last class were residents of the Philippines and this appears generally to have been true over the years the program has been in operation.

A new project, backed by the Bureau of Censuses and Statistics and carried out by the Population Institute, calls for development of two six-week summer training courses in demography. Around ten staff members of universities in various parts of the Philippines will come to Manila for these. On completion they are committed to teaching a course on population

in their own schools and to doing research in their regions on population trends and their causes or on technical problems such as the improvement of vital registration.

On the research side the principal recent and current projects of the institute involve:

1. Analysis of the 1968 and 1973 national sample demographic surveys (undertaken in cooperation with the Bureau of Census and Statistics).
2. Trends in nuptiality in the Philippines (as shown in the two demographic surveys and other sources).
3. The measurement of the work force in terms of concepts of work among Filipinos (in cooperation with the Department of Anthropology).
4. The measurement of labor utilization in the Philippines, employing a proposed methodology by Philip Hauser.
5. The determinants of interprovincial migratory streams (an exploratory study).
6. A comparison of the characteristics of nuclear and extended households in the Philippines.
7. An exploration of the family and social organization in Laguna de Bay communities (with the department of Anthropology and the College of Agriculture, funded by the International Development Research Centre, Canada).
8. Analysis of contraceptive continuation and pregnancy rates.
9. Trends in family planning acceptor characteristics.

The number and range of research projects at the Population Institute is fairly great. However, there has been a noticeable tendency to collect considerable quantities of data which are not fully analyzed and published. A number of the studies that reach completion are M.A. theses. Some of the

expatriate research associates have been credited with numerous papers which have for the most part appeared in mimeographed form. The UPPI has not developed any regular series of research publications.

On the training side the institute has suffered from its physical separation from the university social science departments, which are on the Diliman campus, a trip which can easily take up to two hours when traffic is heavy. As a consequence graduates appear to be quite well trained in a rather narrow technical demography but somewhat weak in their knowledge of related social science areas. It is also unfortunate that although those who complete the two years of training are generally involved in field surveys, they do not receive specific training in survey techniques. If and when the institute moves to the main campus, there will be an opportunity to correct these deficiencies. At the moment there is no space available on the Diliman campus large enough to house the institute.

At UP Department of Sociology, the dean of UPPI teaches a population survey course to undergraduates, which is required of all majors. Under a Sociology faculty member with a Chicago Ph.D., students are involved in a research project on the value of children, which is part of the comparative international study of this subject. The department also cooperated in a research project on population and law in the Philippines.

The Social Research Laboratory, which is attached to the Department of Sociology, organized a conference in Fall 1974 on Philippine Population Studies, at which a large number of social scientists described their research and discussed population research priorities. A comprehensive bibliography on social science research in the Philippines was published in connection with the conference, and a report on suggested research priorities will be submitted to the Population Center Foundation.

The chairman of the Geography Department has an American Ph.D. (Clark University) and spent one year as a post-doctoral fellow in demography at Pennsylvania. He teaches a course in population geography and is currently participating in a study of regional development in the Philippines through an examination of internal migration patterns and their causes.

The Department of Planning includes a faculty member who is actively preparing various population projections for the Philippines.

The School of Economics has a growing interest in economic-demographic interrelations. The dean, who holds a Ph.D. degree in economics from Stamford, is directing a sizeable research project with the title Population and Economics: Studies in Philippine Economic-Demographic Relationships. An instructor in the department, who is slated to be the first recipient of a Ph.D. in economics from the university, is working on an evaluation of family planning programs in the Philippines as his thesis topic and will be sent abroad for post-doctoral training in demography. The department received a large Rockefeller-Ford Grant in 1971 for development of an econometric model which includes a demographic submodel. The thesis is a part of this larger study.

The Economics Department has some 175 undergraduate students, 60 M.A., and 5 or 6 Ph.D. candidates. An additional 12 to 15 students have completed all course work requirements for the doctorate but are working full-time and have not begun a dissertation. Demography is an acceptable field for graduate specialization.

The Department of Anthropology has not itself engaged in teaching or research of a demographic nature. However, a few students from the Population Institute take some of its courses such as one on Social Change. The chairman is currently responsible for a study of the perception and meaning of work

among various kinds of workers. This is the first phase of the labor-force-concept survey which the Population Institute is undertaking. In addition, a group of faculty members from the department have completed a study of "The Cultural Imperatives of Population Education," sponsored by the government. Of some twenty-five current graduate students, nineteen have worked on this project. Their studies have yielded a picture of the attitudes of Filipinos throughout the country and in various ethnic groups and occupations toward ideal family size and other KAP items. The department has seven full-time staff members and four part-time lecturers, all with Ph.D. degrees. It currently awards the B.A. and M.A. degrees and, beginning in 1975, expects to give a Ph.D. in Philippine Studies. The latter program draws students from other countries, with six of these at present working for the M.A. with this specialization.

#### Xavier University

Located in Cagayan de Oro City on the large island of Mindanao in the southern Philippines, Xavier University is operated by the Jesuit fathers and has a fairly large number of foreigners on its staff. Over the years it has evolved from an Ateneo and now offers undergraduate and master's degrees. At both levels students may specialize in population within the sociology or economics curricula. Courses are offered in Population, Demographic Methods and Techniques, Urbanization, Population and Development, and in such related areas as Rural Sociology, Mindanao Culture, and so on. Students may write theses on population subjects. A Mindanao Center for Population Studies was established in 1971 to carry out regional research.

Five or six persons have already been given or are receiving training at the doctoral level in demography and another social science at American

universities. The Population Council is currently supporting staff positions to cover the first years of their return to teaching. It is also providing funds for local fellowships to allow full-time study by M.A. and A.B. candidates in population and development. The program is under the direction of a professor-priest who holds a Ph.D. in sociology-demography from North Carolina. He has carried out small research studies on fertility, migration, and KAP toward family planning in Mindanao as well as sociological studies of Mindanao life and culture. He will monitor population studies in a new Office of Technical Planning in Cagayan de Oro City. This agency has been established with Ford Foundation assistance and will be funded permanently by the city.

The Ateneo de Manila University has one expatriate professor trained in sociology and anthropology, whose research and teaching interests focus on urbanization in the Philippines and the consequences of present trends of net migration to Manila and other urban centers.

#### Population Center

The center began operation in mid-1974 in a new building in Manila constructed specifically to house it. The stated intention of the center is to bring together under one roof the various groups in the country with "population" programs and interests. This includes all appropriate government agencies such as the Population Commission, private family planning groups, and foreign national and international agencies with population activities. The center houses a large population library, data banks and computer facilities, programmers and machine operators, research offices and laboratories, and seminar and meeting rooms. Expectations are that both the Population Center Foundation and the Population Commission will review applications for popula-

tion research and make grants to cover appropriate projects. Substantial funding for such research may be covered by the Rockefeller Foundation, which is providing other support along with USAID and the government. It is expected that the PCF will process grants to the private sector, and the Population Commission will process grants to government agencies. The latter is handled by the commission's research committee, of which the dean of the University of the Philippines Population Institute is chairman. The commission's former chairman, an obstetrician-gynecologist, has assumed the directorship of the PCF. Until now, diverse population-related projects have lacked integration and coordination. The notion is that the center can serve as an administrative and coordinating group to prevent wasteful duplication.

## V. CONCLUSIONS

### Demography and Related Social Science

Interest in population matters has become widespread in the Philippines in a short period of five to seven years. The expression of this interest is seen most prominently in the rapid growth of family planning groups and in the establishment of a national Population Commission and the Population Center. Demographic training programs at the M.A. level have been established at two universities, but the number of students who have completed the degree requirements is still small. Demographic research has generally been limited to modest projects, and actual published results of the fairly numerous field surveys have been far fewer than might have been predicted. The leading university center continues to be severely handicapped by a lack of a permanent staff with advanced training.

In the country generally there has been an impressive change in the past few years in the amount of discussion and activity related to population

and especially to control of fertility. The adverse effects expected from a continuation of the rapid rate of natural increase in the country are more widely realized today, but the attempts to cope with the problem are still relatively unsophisticated. There is a primary need for trained manpower and for its fuller utilization in both universities and appropriate government ministries and other offices.

#### Health and Family Planning

The following are the funding priorities based mainly on the problems the population program still has to contend with, the interest of the institutions, and the existing staffing pattern of the Department of Health.

1. Development of a strategy for reaching couples in the rural areas with accurate information about contraception and availability of contraceptive services. These studies would involve innovative communication schemes as well as alternative methods of delivery of services different from what are presently being provided.

2. Support or establishment of community health demonstration and teaching areas for the medical and nursing schools where faculty and students learn about problems met in the field; elicit what people want and need; and, hopefully, with the involvement of the community, come up with solutions to the problems. These communities can also be a source of information and experience for enriching the curriculum in population/family planning.

3. Development and provision of teaching materials and aids to medical and paramedical educational institutions.

4. Determination of the type of staffing and supervisory patterns for the rural health unit, the provincial, and regional health offices that will allow an effective and efficient delivery of family planning services

without sacrificing other health services offered by the units.

5. Advanced education and training of medical and nursing faculty involved in the teaching of population/family planning. For example, (a) WHO supported two members of the medical faculty of Sto. Tomas and of Cebu Institute of Medicine for an M.P.H. degree course in the Institute of Public Health, University of the Philippines, with concentration of elective in MCH/population/family planning, or (b) faculty may be sent for out-of-country.

6. Development of education centers (hospital based) for the training of medical personnel in modern sterilization techniques.

7. Study of existing and potential financial mechanisms for providing contraceptive as well as sterilization services such as "hilots" being paid for contraceptive service, using present structure of medicaid, or payments to private physicians.

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SINGAPORE

Vincent H. Whitney and John K. Friesen

I. COUNTRY SETTING

Singapore is a small island at the end of the Malay Peninsula, with a population estimated at 2.3 million in 1973. Singapore enjoys one of the highest per capita incomes in Asia. Salient demographic, social, and economic data appear below:\*

Population (in millions)	
1972 estimate	2.2
1985 projection	2.6
Rate per 1,000 population (1971)	
Births	22.3
Deaths	5.4
Natural increase	16.9
Percent distribution of population by age	
All ages	100
Under 15 years	38
15-64 years	58
65 years and over	4
(Year)	(1971)
Dependency ratio	73
Females aged 15-44 (1972 estimate in millions)	
Total	0.49
Married	0.28
Density (1972 population/sq.km)	3,675
Percent urban of total population	
1970	100
1985 (projected)	100

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\* Source: Dorothy Nortman, "Population and Family Planning Programs: A Fact book." Reports on Population/Family Planning, Population Council, 1973.

Percent literate	
Male	u
Female	u
(Year)	(u)
(Age group)	(u)
Percent of eligible age group in school	
(Primary school age group)	(6-11)
Male	97
Female	94
(Secondary school age group)	(12-17)
Male	72
Female	69
(Year)	(1972)
Population (in thousands)	
Per physician	0.7
Per nurse	2.2
Per midwife	1.1
Per hospital bed	3.5
(Year)	(1971)
Gross domestic product (GDP)	
Per capita in US\$ (1970 or 1971)	1,071
Percent derived from agriculture (recent year)	3
Annual percent increase in real GDP	
Total	u
Per capita	u
(Years)	(u)
Per capita food production, 1969-71 average index (1959-61 = 100)	
	u

## II. POPULATION POLICIES AND PROGRAMS

Singapore's first five-year national program aimed at reducing the crude birth rate from 32 per 1,000 in 1964 to 20 per 1,000 in 1970. With a fairly constant death rate of 5 per 1,000, this would give a national increase rate of about 1.5 percent. This target was not quite achieved; the crude birth rate fell to 22.1 per 1,000 and the rate of national increase to 1.7 percent. The second five-year program (1971-75) is intended to recruit 16,000 new acceptors per year to consolidate the efforts of the first five years.

In pursuit of its policy of fertility reduction, the government has legalized abortion and sterilization. It has also introduced other measures, such as restricting maternity leaves to the first three children, eliminating tax deductions after the third child, charging higher maternity fees for higher-order births, and making public housing readily available to married couples.

### III. UNIVERSITY AND INSTITUTIONAL DATA

#### Health-Related Institutions

The Department of Social Medicine and Public Health at the University of Singapore instructs undergraduate and postgraduate students in social medicine and public health. Undergraduates are exposed to community medicine for three years, starting from the second year of medical studies.

The department also conducts a full-time nine-month course every year for postgraduate doctors, mainly from Singapore, Malaysia, and the other Southeast Asian countries. The course ends with the examinations for the M.Sc. (Public Health) and M.Sc. (Occupational Medicine).

Every fourth year student does a community health survey, which lasts one month and covers the total health of a community. Demography constitutes an important part of the biostatistics course.

The staff members of the department undertake research on a wide variety of subjects: the living conditions and health problems of flat dwellers, nutrition in pregnancy, the problems of the aged, conditions in small factories in Singapore, and so on. In addition, the staff cooperate with their clinical counterparts in research into the problems of various diseases, for example, a gastroenteritis study with a pediatrician, or height and weight studies of school children.

The major research body attached to the department is the SEAMEO project, which carries out full-time studies on health problems of flat dwellers. The department, and indeed the university, is a public university and is entirely subsidized by the government. The university works closely with various ministries (Health, Education, Culture, and others). Part-time lecturers for undergraduate and especially postgraduate teaching are recruited from various government bodies and also from the private sector.

In July 1973 the student enrollment stood at 5,609. There were 253 reading for higher degrees and 49 part-time students reading for first degrees.

The department has a total of thirteen full-time academic staff members (including four trainee lecturers) and approximately fifty part-time lecturers (staff from other departments in the university, government departments, and the private sector). In addition, an average of two to three visiting professors or lecturers come from abroad every year.

The university is open to all who possess the required qualifications, and entry is based entirely on merit. Since 1953 the department has trained about 250 community health physicians from Southeast Asia and beyond, including about a dozen physicians from the developed countries. The D.P.H. (which was replaced by the M.Sc. in 1973) is recognized by the General Medical Council of the United Kingdom. The department is listed in the WHO Director of Schools of Public Health. Several senior members of the staff of the department have served as consultants to WHO, other international health agencies, and national governments and are members of specialized panels of these bodies. The department is also the Southeast Asia Ministers of Education Organization (SEAMEO) center for the teaching of urban and occupational health and family planning.

Demography is an important component of the course in biostatistics, given at undergraduate and postgraduate levels. Methods and motivation for family planning are included in the core courses in both public health and occupational medicine and, in greater depth, in the course on personal health services and health education. There is no separate course on population studies. Demography and family planning are also built into the community health survey carried out by fourth-year medical students. Demographic characteristics of the community are explored, and knowledge, attitudes, and practices in family planning are studied. Seminars on family planning and population problems are held from time to time.

The main areas of research include fertility levels and trends, as well as population projections. There is also a study on "hard-core" women who seem to resist all family planning methods.

Several of the staff are members of either the National Family Planning and Population Board (FPPB), the Evaluation Committee of the FPPB, or the Family Planning Association. Through these links, staff members are engaged in applied research on problems specifically related to the program in Singapore.

For the Medical Faculty as a whole, research on the clinical aspects of family planning are carried out by the Department of Obstetrics and Gynecology. Research on demographic aspects, social aspects, and planning and evaluation involves the Department of Social Medicine and Public Health.

Since the creation of the department, population studies have been part of the curriculum and research program. Recently, however, greater emphasis has been placed on rural-urban migration, family planning, and participation in census studies. Moreover, the department has been drawn to

an increasing extent into participation in talks, exhibitions, seminars, and campaigns about family planning.

The department has been designated as the center for family planning instruction in the SEAMEO-TROPMED (Tropical Medician) program and plans to expand family planning content over the next few years. An elective course in family planning is planned for the last trimester in the M.Sc. public health course. Biostatistics and demography are being strengthened by the addition of more staff.

A project is being worked out with the Department of Obstetrics and Gynecology and the Singapore Family Planning Association to study family planning knowledge and beliefs in depth.

Singapore appears to offer a particularly attractive location for training persons from the region in public health aspects of family planning. The department has an interlocking relationship with the Singapore Family Planning and Population Board, practical and academic experience in demography and biostatistics, and connection with a lively and resourceful family planning program encompassing a number of ethnic groups. It is already involved in several regional programs through the SEAMEO. Institutional development, at a modest level, should be aimed at building up the department's capacity to take students from the region through course development, fellowship funds, training, and staff development.

#### Social Science-Related Institutions

At the beginning of 1974, research and training in demography in Singapore continue to be minimal. What there is, is carried out mostly at the University of Singapore.

The university was established during the period of British colonial rule as the University of Malaya. It acquired a reputation at that time as the leading university in the region. It now has more than 10,000 students and offers undergraduate, master's, and Ph.D. degrees in most departments, including all the social sciences. Several doctoral degrees have been awarded in economics, and the first was given in sociology in 1973.

There are two demography courses in the Department of Sociology, a general population course for undergraduates and an advanced course for fourth-year students working toward M.A. degrees, of whom there are currently two or three enrolled at any one time. One staff member (Dr. Chang, Cheng-tung), who studied at the University of Chicago, is involved in a study of the decision-making process with respect to the last child in a family. This is funded by the International Labor Organization and uses some of the questions from James Fawcett's value-of children project. The department itself has now grown to fourteen faculty members and has six persons doing foreign doctoral study. It has already lost its formerly pronounced expatriate character. However, there is no staff person who is strictly a demographer.

In the Department of Economics, population topics are taken into account only in specialized courses in such areas as manpower and economic growth. There is at most occasional limited secondary analysis of population statistics in research projects on these same subjects. The Economic Research Center, which the Ford Foundation funded for seven years, is undertaking manpower surveys for the government on a regular basis but otherwise is not doing any population research. The former director, Dr. You, Poh-Seng, has been replaced by Dr. Pang, Eng-Fong, a Singaporean, whose field of academic interest is the labor force. Dr. Pang is assisted by two part-time persons

from the Ministry of Finance, which now funds the center. Hopes that demographic work would be developed on a permanent basis during the years of foundation support have not materialized.

A Population Commission, headed by Dr. Saw, Swee-Hock, does not itself carry out research or training.

At the instigation of the deputy prime minister, an Institute for Southeast Asian Studies was established early in 1974. This is a government research agency, but it is apparently going to be largely autonomous. Substantial funds have already been appropriated by Parliament. There is to be a major focus on comparative regional studies, and any such analysis will include a review of population trends and their significance. The director is Dr. Saundhu, whose own fields are political science and public administration. It is intended that the eight or ten research associates will all be persons with Ph.D.'s or equivalent experience and ability. Two or three of them are to have an interest in population factors as these relate to their particular academic fields, and one will be a demographer, provided a suitable person can be found. The institute is located temporarily on the campus of the University of Singapore but expects to acquire a building of its own elsewhere.

Another new organization, the Regional Institute of Higher Education, has been set up with Ford Foundation and some government funding. Among its announced interests is a seminar conference to evaluate what has been accomplished in the region through population activities.

#### SOURCES OF INFORMATION

Site visit, John K. Friesen, April 1974.

Site visit, Vincent H. Whitney, 1974.

June 1974

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SRI LANKA

Nicholas H. Wright

I. COUNTRY SETTING

Sri Lanka is often cited as a characteristic example of the modern demographic transition. The death rate declined dramatically in 1946-47, following control of malaria, resumption of food supplies interrupted by World War II, and vigorous efforts to bring adequate maternal and child health services to the less developed parts of the island.

The Sri Lankan population is young and the dependency ratio is high, but not as high as in other developing countries, owing to fifteen years of birth rate decline. There has been little rural-urban migration, and less than 20 percent of the population is strictly urban. The economy has not been vigorous in recent years and jobs are not available in the urban areas, but social services such as health, education, and transport have been generally available at low or no cost. Salient demographic, social, and economic characteristics follow:\*

Population (in millions)	
1972 estimate	15
1985 projection	17.7
Rate per 1,000 population (1971)	
Births	29.4
Deaths	7.9
Natural increase	21.5

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\*Source: Dorothy Nortman, "Population and Family Planning Programs: A Fact-book." Reports on Population/Family Planning. The Population Council, 1973.

Percent distribution of population by age	
All ages	100
Under 15 years	40
15-64 years	56
65 years and over	4
(Year)	(1970)
Dependency ratio	79
Females aged 15-44 (1972 estimate in millions)	
Total	2.9
Married	1.9
Density (1972 population/sq.km)	195
Percent urban of total population	
1970	20
1985 (projected)	25
Percent literate	
Male	90
Female	75
(Year)	(1970)
(Age group)	(10+)
Percent of eligible age group in school	
(Primary school age group)	(5-9)
Male	100
Female	98
(Secondary school age group)	(10-16)
Male	45
Female	42
(Year)	(1971)
Population (in thousands)	
Per physician	3.9
Per nurse	3
Per midwife	5
Per hospital bed	0.3
(Year)	(1971)
Gross domestic product (GDP)	
Per capita in US\$ (1970 or 1971)	175
Percent derived from agriculture (recent year)	33
Annual percent increase in real GDP	
Total	6.2
Per capita	3.8
(Years)	(1965-70)

## II. POPULATION POLICY AND PROGRAMS

In 1958 the Swedish and Ceylon governments set up pilot projects to test the suitability of then available contraceptive methods in Ceylon. Despite the success of the pilot efforts, a public policy favoring family planning was slow in coming. After the 1965 elections, however, the new government decided to make family planning available through the extensive health services network, family planning services to be integrated with maternal and child health services. The desirability of reducing the crude birth rate by one-third (from 36 to 25) in ten years was stated by a committee that participated in formulating policy, but this goal was never widely publicized. (It did not appear, for example, in the Five-Year-Plan.)

With the assistance of the Ford Foundation, the Population Council began a project to help evaluate the new program. The program developed slowly. From about 32,000 acceptors in 1967, the program advanced to 48,000 in 1968, and levelled to 50-55,000 for the next three years, less than Sri Lanka's excellent health network, large numbers of well-trained health personnel, and high literacy might have led observers to expect, and well short of the 110,000 yearly acceptors thought necessary to reach the 1975 target birth rate of 25. Implementation was cautious because of sensitivity to ethnic balance and because of the 1970 general elections. A serious resurgence of malaria in 1967-69 and a widespread civil insurrection in 1971 also diverted efforts. By 1972, civil unrest had lessened and the government gave family planning higher priority in the new Five-Year-Plan. The number of new acceptors rose to 75,000 in 1972 and will likely exceed 100,000 in 1973.

Massive assistance has started to flow through the UNFPA at a planned level of US\$6 million over a four year period, including projects for (1) a postpartum family planning program; (2) expanded teaching of population

dynamics, human reproduction, and family planning at the two medical schools, (3) a demographic teaching and research unit at the University of Sri Lanka, Colombo campus, (4) mobile family planning services to tea estate laborers; and (5) an expanded information and education program through the Ministry of Information. Most projects are starting slowly.

### III. UNIVERSITY AND INSTITUTIONAL DATA

The university system is publicly financed, except for the UNFPA projects. In recent years, the government budget for the universities has been declining (1971-72, Rs4.7 million; 1972-73, Rs4.2 million; US\$1 = Rs11.8). Authority is centralized -- one university, but several campuses. The government is prominently represented on the Board of Governors. In general, both the Peradeniya and Colombo campuses have more prestige and influence than the others.

#### University of Sri Lanka, Colombo Campus

##### Faculty of Arts

Under the leadership of Dr. A.D.V. de S. Indraratne, professor of economics, a Demographic Teaching and Research Unit will be set up with UNFPA support over a three year period. The support provides for two long-term expatriate consultants, fellowships, books, and other foreign exchange costs. Undergraduate courses will be offered in the second, third, and fourth year, and a one-year M.A. course is also planned. Teaching starts in the spring of 1974 and the first group of M.A. graduates may be expected next year, although it is not at all clear who will employ them. The expatriate consultants (as yet unnamed) will have Ceylonese counterparts (also unnamed) and the unit will have one research assistant in addition to its part-time director. Also contributing to the unit's program will be the Department of Economics, with a

full complement of fourteen faculty, and a weaker Department of Sociology and Social Welfare with two assistant lecturers. Dr. Indraratne has ambitious research and publication plans.

Active in coordinating the beginning of the unit is a former Population Council Demographic Fellow, S.A. Meegama, now with the Ministry of Planning and Employment.

#### Faculty of Medicine

With the assistance of another UNFPA-supported project through WHO, the teaching of human reproduction, family planning and population dynamics will be strengthened at both Medical Faculties (Colombo and Peradeniya). The four-year project, funded at \$450,000, aims to bring these subjects into the medical curriculum much earlier than before, and to add them to postgraduate courses now offered in Preventive Medicine. At both Faculties, the departments involved are Pediatrics, Obstetrics and Gynecology, and Preventive Medicine. The latter department, under Dr. Earle de Fonseka in Colombo and Dr. Malcolm Fernando in Peradeniya, has long been involved with rural field projects used intensively in medical student training.

The grant provides for consultants, mostly long-term, in Demography, MCH-Family Planning, Behavioral Science, and Statistics; salaries for senior as well as lower level local personnel; overseas fellowships; and equipment and vehicles for the field projects. The plan of operations calls for strengthening of family planning services at hospitals associated with the Medical Faculties and for research in very broad, and as yet poorly defined areas.

There is much ferment at both medical schools. Last year, more physicians emigrated from Sri Lanka than were graduated (currently about 200 graduate per year). This has raised serious questions about medical education policy. There is enough instability in the two faculties -- more in Peradenia

than Colombo -- to slow work on the UNFPA-WHO project.

Sri Lanka Association for Population Studies

This is a private association set up to promote the scientific study of the Sri Lankan population. Other objectives are, (1) sponsoring research, (2) publishing books, monographs, and journals on population matters, and (3) organizing conferences, seminars, and meetings. Members consist of physicians on the Medical Faculty and social scientists on the Arts Faculty, Peradeniya campus. There are also some non-faculty members, for example, Dr. C.E.S. Weeratunga, currently Secretary of Health, Ministry of Health.

Marga Institute

The Marga Institute is a private, professional, non-political research organization concerned with development problems. Organized in 1972, it includes some prominent officials of the last government and has attracted support from international donors.

Marga holds seminars, evening study groups and publishes a quarterly journal. Several studies undertaken and completed are:

1. "Unified Approach to Development Analysis and Planning" (for UN/UNRISD).
2. "The Co-operative System of Small Farmer Credit in Sri Lanka (for USAID).
3. "A Comparative Study of Agricultural Change and Population Change" (for ECAFE).
4. "Study of Non-Formal Education in Sri Lanka" (for UNICEF/ICED).

There are eight other studies or projects underway. Marga sponsored the publication of the book on population change and economic development in Sri

Lanka by Gavin Jones and S. Selvaratnam in 1972.

There are currently 40 permanent staff and 110 field or project staff.

Unfortunately, there have been increasing difficulties between Marga and the new government. Current governmental officials were forbidden to participate in Marga's activities in early 1973 and many were forced to resign from the Management Board. Further, a directive has gone out from the Department of Census and Statistics forbidding the sharing of data with Marga.

Marga appears to be the most professional, most able organization in Sri Lanka for development studies. They do not yet have strong demographic capacity, but will likely develop it.

#### IV. CONCLUSION

The available, realistic opportunities for outside support for institutional development appear adequately filled by the UNFPA.

#### SOURCES OF DATA

Site visit Dr. Nicholas H. Wright January 1974.

March 1974

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TAIWAN

Eleanor Ching-ching, George Cernada and Vincent H. Whitney

I. COUNTRY SETTING

Taiwan:\*

Population (in millions)	
1972 estimate	15.1
1985 projection	19.9
Rate per 1,000 population (1971)	
Births	24.1
Deaths	4.7
Natural increase	19.4
Percent distribution of population by age	
All ages	100
Under 15 years	39
15-64 years	56
65 years and over	5
(Year)	(1971)
Dependency ratio	78
Females aged 15-44	
(1972 estimate in millions)	
Total	3.3
Married	2.0
Density (1972 population/sq.km)	421
Percent urban of total population	
1970	63
1985 (projected)	Unknown

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\*Source: Dorothy Nortman, "Population and family planning programs: A Fact-book," Reports on Population/Family Planning, 2, The Population Council, 1973.

Percent literate	
Male	90
Female	70
(Year)	(1971)
(Age group)	(15+)
Percent of eligible age group in school	
(Primary school age group)	(6-11)
Male	91
Female	90
(Secondary school age group)	(12-17)
Male	64
Female	50
(Year)	(1971)
Population (in thousands)	
Per physician	2.5
Per nurse	3.7
Per midwife	6.7
Per hospital bed	0.7
(Year)	(1971)
Gross domestic product (GDP)	
Per capita in US\$ (1970 or 1971)	421
Percent derived from agriculture	
(recent year)	18
Annual percent increase in real GDP	
Total	10.3
Per capita	7.1
(Years)	(1960-69)
Per capita food production, 1969-71	
average index (1959-61 = 100)	116

In 1972 about 84 percent of those age six and above were literate (male 91 percent; female 76 percent). Taiwan has one of the most highly developed school structures in Asia, and in 1973 a quarter of the population was enrolled in formal education. Free and mandatory education has been provided through grade nine since 1968. During 1971, 98 percent of elementary school age children were enrolled in elementary schools, and 81 percent of elementary school graduates went on to junior high. In 1972 there were nine universities, fourteen four-year colleges, and seventy-six junior colleges, with a total faculty of 12,000 and an enrollment of more

than 250,000. Most of these schools are located in the Taipei area.

## II. HEALTH POLICIES AND PROGRAMS

A ten-year health plan was established in 1964 as part of the overall national economic development plan. It gave priority to the control of communicable disease, tuberculosis control, family planning, sanitation, industrial health, drug and food control, and maternal and child health. Lack of funds has caused modification of the plan from time to time. Health has received decreasing portions of the total provincial budget, from 4.7 percent in 1964 to 3.5 percent in 1971.

In March 1971, the National Health Administration was placed directly under the cabinet, replacing the former Health Department in the Ministry of Interior and assuming responsibility for supervising health activities in Taiwan and coordinating the health departments of Taiwan City and Taiwan Province.

The health program has virtually eliminated cholera, malaria, and polio. The tuberculosis prevalence rate has declined, as has that of trachoma and syphilis. Health problems relating to industrialization, urbanization, and population expansion remain.

There are six medical colleges (three in Taipei, two in Taichung, one in Kaoshiung), with an estimated 12,000 students (4,000 of whom are candidates for the bachelor of medicine). Each year about 1,800 graduate, including about 600 physicians. (Most of the others are nurses.) Each medical school has a seven-year program (except Chung Shan Jr. College at Taichung, with a five-year certificate program) for the degree of bachelor of medicine, including a one-year internship. At present there are about 6,000 physicians on the island, or a ratio of one to 2,500 population.

Two of the six medical colleges (National Taiwan University and National Defense Medical College) offer four-year baccalaurate degrees in nursing. The other four colleges, and the other institutions described in this report, offer an R.N. certificate after a postgraduate national exam. Eleven junior nursing colleges provide both five-year and three-year initial training. A junior high school graduate can be admitted to the five-year program, a senior high graduate to the three-year program. In addition, there are fifteen vocational nursing schools. One college provides a post-R.N. two-year advanced training (evening) course. The total graduates of all nursing institutions in 1970 were 1,600.

Only National Taiwan Normal University offers college-level training for health educators. (NNU is the major teacher training center for middle schools in Taiwan, and about two-thirds of its graduates teach.) About 120 students are enrolled in the health education department of the School of Education, and about thirty graduate annually. Of those graduating, about 20 percent go into public health work, 65 percent into school health teaching at the junior high and high school levels, and the rest go into other occupations.

### III. POPULATION POLICY AND PROGRAMS

The national target is to reduce the crude birth rate from 27.1 at the end of 1970 to 24.4 by 1976. A national population policy committee was established in 1970 in the Ministry of Interior under the chairmanship of the vice-minister. After a period of relative inactivity, it has recently been revived. Its formal responsibilities are the determination of population policy in growth and in internal migration and the execution of family planning services to lower the growth rate.

The island-wide family planning program has been operated since 1964 by the Taipei City Health Department and the Taiwan Province Health Department. Oral contraceptives and condoms are available directly from the program at a subsidized cost; IUD's are inserted by private physicians, partially subsidized by the program. Acceptors are recruited by field workers supported by mass media campaigns.

#### IV. UNIVERSITY AND INSTITUTIONAL DATA

As citizens of a country which has been modernizing rapidly over the last decade, the Taiwanese place a high value on education. It is widely accepted, especially in urban areas, that high school and college educations are necessary to "success" for a couple's children, and the cost of advanced schooling appears to be one factor in the overall reduction of fertility among married couples.

In 1970 the country counted nine universities, thirteen four-year colleges, and seventy junior colleges. Collectively they had a reported enrollment of some 100,000 students, taught by 4,700 faculty members. The bachelor's degree requires four years of study, with two additional years needed for a master's degree. Fourteen departments at the National Taiwan University and eleven departments in other schools offer the Ph.D. degree in a variety of subjects. The Normal program for an M.D. takes seven years.

The principal institutions in Taiwan above the junior college level are shown in Table 1.

#### Health and Family Planning

##### National Taiwan University

National Taiwan University is the key university center for dissemination of medical and public health knowledge in Taiwan. It was the first

Table 1

Some Institutions of Higher Learning, Taiwan, 1970

	<u>Name</u>	<u>Date Founded</u> <sup>1</sup>	<u>Location</u>	<u>Number of Departments</u>	<u>Number of Institutes</u>	<u>Number of Faculty</u>	<u>Volumes in Library</u> <sup>2</sup>
1.	National Taiwan University	1928 1945	Taipei	39	31	1,409	1,521,236
2.	National Taiwan Normal University	1946	Taipei	18	9	730	386,804
3.	National Chengchi University of Mu-cha	1954	Taipei	22	9	374	364,886
4.	National Tsing Hua University	1911 Peiping 1956 Taiwan	Hsinchu	4	4	79	29,060
5.	National Chiao Tung University	1896 Shanghai 1958 Taiwan	Hsinchu	5	2	111	128,040
6.	National Central University	1915 Nanking 1968 Taiwan	Chunghi	6	1	85	9,001
7.	National Cheng Kung University	1956	Tainan	20	6	420	124,418
8.	National Chung Hsing University	1961	Taichung	25	5	386	211,324
9.	Soochow University	? mainland 1954 Taiwan	Shihlin, Taipei	12	2	283	82,520
10.	Tunghai University	1955	Taichung	13	2	220	284,172
11.	Tatung Institute of Technology	1963	Taipei	4	0	300	30,300
12.	FuJen Catholic University	1929 Peiping 1963 Taiwan	Hsinchuang	23	4	459	152,340
13.	College of Chinese Culture	1962	Yangmingshang, Taipei	34	12	1,051	175,568

university in Taiwan, established in 1928 by the Japanese government as Taihoku Imperial University. It became National Taiwan University in 1945 after the retrocession of Taiwan to China. At present, some 13,000 students are enrolled, and there are some 1,400 faculty. It is the leading academic institution in Taiwan, and its stature is high throughout most of Asia. From 1945 to 1974 almost 3,500 students graduated from its College of Medicine. About 1,500 medical and paramedical students are enrolled in its undergraduate medical college and some 80 in postgraduate courses annually. In 1974, 144 students will graduate with the Bachelor of Medicine degree.

This inventory of the College of Medicine focuses on the Department of Public Health, the Institute of Public Health, and the School of Public Health. These may be considered as one unit -- the director is the same and the faculty members of the institute and department are concurrently faculty of the school, which is at an embryonic stage.

The faculty of the Department of Public Health comprises nineteen full-time members: three full-time professors (including the director of the institute and school and chairman of the department, currently H.Y. Wu, M.B., M.D., M.P.H.), seven associate professors, seven instructors, and two assistants. In addition, there are eight to ten part-time faculty.

The department's principal role is to teach undergraduate students in the College of Medicine. From the third through the seventh year, all medical students must take required courses in the public health department: introduction to public health, biostatistics, epidemiology, environmental medicine, public health practice and medical care, seminar in public health problems, and (in the seventh year) two weeks of field practice as part of a rotating internship program. Some of these courses are also required for

dental, nursing, pharmacy, and medical technology students.

The Institute of Public Health was established in 1960 to provide a two-year program of courses leading to an M.S. degree in Preventive Medicine for physicians or a Master of Public Health degree for others (B.S. holders in pharmacy, medical technology, nursing, rehabilitation medicine, and health education). There have been only twenty graduates since 1960, but the program has expanded in the past two years and now has fifteen students: one M.D., six pharmacists, two psychologists, two health educators, two nurses, one medical technologist, and one plant pathologist. Recruiting suitable candidates, especially physicians, is difficult. Of the six M.D.'s who received the M.S. degree, only one is now in public health. Some recent graduates have been employed in industry and drug control in Taipei and in teaching positions as public health faculty.

The School of Public Health was established in August 1972 to educate paramedical workers in health administration and environmental sanitation. Two kinds of four year courses are offered, leading to a B.S. in Health Administration or Environmental Sanitation. The faculty of the department and the Institute of Public Health teach public health courses (for example, epidemiology); faculty of other departments of the medical school provide related courses (for example, physiology); the natural sciences, humanities, and social sciences are taught by faculty of the Colleges of Science, Arts, and Law. The second semester of the fourth year is devoted entirely to field practice in health administration agencies, teaching hospitals, health labs, industrial areas, and so on. The first class of about forty will graduate in 1976 (twenty in administration, twenty in sanitation).

The National Taiwan University Hospital is the teaching hospital of the College of Medicine. It has about 1,000 beds. Its main functions are: teaching, service, research, and community health. The hospital is the largest civilian facility providing diagnostic and treatment services in Taiwan and has fifteen departments, six services, and several newly developed laboratories. The teaching staff hold key positions in medical care and administration; many have received training abroad. About 1,300 outpatients visit clinics daily, 12,000 inpatients are admitted annually, 2,000 babies are delivered, and about 6,000 major operations are performed each year.

#### Medical College Population and Reproductive Medicine Group

This informal group consists of about eight medical college faculty with an interest in family planning and reproductive medicine and physiology. They are headed by Dr. H.F. Wei, the present dean of academic affairs for the university and former dean of the medical college. Other members include the medical college's current dean and key faculty active in population and family planning and reproductive studies, the director and former director of the public health unit, a urologist (who directs a vasectomy clinic at NTU hospital), a physiologist, a biochemist, two public health physicians with epidemiological and biostatistics specialties, an MCH pediatrician, and a gynecologist. This is a formidable group in terms of their influence on the medical and public health profession in Taiwan.

#### Teaching and Research

Under the direction of Dr. K.P. Chen (then director of the Public Health Institute and Department), an interdisciplinary committee began in 1972 to plan a course to be given to all medical students. Financial support was provided by the Joint Commission on Rural Reconstruction to help draft

the course outlines and later print a collection of the lectures as a textbook (published in June 1973 in English: Population and Reproductive Medicine, 204 pages).

The population and reproductive medicine course is provided to all fourth-year medical students in the second semester, one hour per week for seventeen hours total (fifteen lectures and a two-hour general discussion). It consists of ten subject areas: (1) public health and family planning aspects, (2) population dynamics, (3) hypothalamic-pituitary-gonadal axis, (4) biochemistry of sex hormones, (5) reproductive medicine (male), (6) reproductive medicine (female), (7) pediatric aspects, (8) psychiatric aspects, (9) socio-economic aspects, and (10) general discussion and seminars.

In addition, the twenty administration students in the newly formed B.S. program at the School of Public Health will be offered a course in their third year on family planning and population. The institute also has an elective course for M.S. or M.P.H. students: seminar in population studies and family planning.

The institute has conducted many public health and several small-scale family planning education and service-oriented studies in its Taipei City demonstration area. In 1972 it conducted an evaluation of contraceptive services on an island-wide sample basis in coordination with the National Health Administration.

#### Assessment

Two public health faculty are members of the NTU Behavioral Population Study Group, which is planning the proposed Population Studies Center at NTU. Dean Wei (former dean of the medical college) is in charge

of this Population Studies Center planning group. This behaviorally oriented population unit is seeking institutional development support in 1974.

Some support from abroad may also be needed in research, expanding teaching to students, and advanced training for faculty abroad.

1. For research, local funding sources may be able to cover small-scale evaluation projects. The projects will probably be tied in with the Taipei Family Planning Promotion Center's program of education and services, where little evaluation has been done; the center itself has virtually no trained staff.

2. For expansion of teaching, the paramedical disciplines need more exposure to courses similar to that provided for the fourth-year medical students. Field training for summers in rural areas would also provide these upper middle-class medical and paramedical students an orientation to economic and social problems of lower-economic families, particularly the effect of population and family size. The Public Health Institute has asked the Rockefeller Foundation for three-year support (US\$16,000) for this.

3. To provide more solid population content, a year's postdoctoral training in the socio-economic aspects of population at an American university for one faculty member would be helpful. In addition, one teaching assistant has been selected to apply to the Council for MPH training in the United States in 1975-76. Also useful might be some occasional financial help for faculty to attend population and family planning conferences abroad. At the moment there is no source of fellowship support for this purpose.

The needs of the population and reproductive medicine teaching group are being met to a limited extent. Two key physicians have recently been trained at Johns Hopkins in culdoscopy and related areas. The Council

has provided culdoscopic equipment. The International Committee for Applied Research in Population (ICARP) has sponsored training for laparatomy, and NTU Hospital will hold training for others in mid-1974. The Council has provided grants for reproductive and biochemical research at NTU. The Department of Obstetrics and Gynecology at NTU has long been involved with various Council-sponsored studies, and its director, Dr. P.Y. Wei, continues to serve as a consultant and to work on clinical studies of various IUD's, the mini-pill, introduction of the Lippes Loop through the medical associations, and copper-T trials.

The Medical School is now affiliating with the University of California Medical School at San Francisco and soon will exchange faculty and fellows. Probably the local National Science Council will provide five fellowships annually to young faculty to study abroad. Possibly the public health unit would get one fellowship each two years at the Berkeley School of Public Health. When this is settled, the needs for fellowship support or funding to attend related conferences might be considered.

#### Provincial Junior College of Nursing

The Provincial Junior College of Nursing in Taipei City was established in 1954. It has an enrollment of 826 students from all over the island and has sixty-eight and fifteen part-time faculty members. The junior college seeks to train high-standard clinical and public health nurses, midwives, and teaching and administrative staff for nursing colleges and hospitals. Organizationally, it breaks down as follows:

	<u>Enrollment</u>	<u>Qualifications</u>
Three-year nursing school	235	Senior high graduate
Five-year nursing and midwifery school	427	Junior high graduate
Evening school for advanced training	154	Other nursing school graduates

One teaching hospital with an MCH center. Ten hospital staff involved in family planning-related teaching and field training.

The Provincial Junior College of Nursing is a leader in nursing and midwifery education in Taiwan. The dean and key staff serve on many national committees related to nursing education, and they have a strong sense of the need to upgrade nursing education as a whole in most of Taiwan's colleges. Because of its high standards for admission and teaching, graduates tend to be better trained and to secure important positions in hospitals and other nursing schools. Of 912 graduating since 1970, 285 went to work in hospitals (47 at the nurse supervisor level or above), 60 went to key positions in county or city health departments and stations, 201 went into educational jobs, and 130 went abroad. The school also has its own teaching hospital and a demonstration field area in Taipei City.

In terms of family planning, the college has conducted activities in teaching, service through the teaching hospital's MCH center, and in-service training.

Family planning education is included in two courses: about three hours in obstetrical nursing and five hours in public health nursing. Team teaching methods are employed. The dean is writing a textbook for public health nursing that will include a chapter on family planning. She hopes it will become a major reference work for all nursing schools after pub-

lication in 1974. In addition to classroom teaching, all students do six weeks of field training in hospitals and community settings. A fair amount is in family planning and is supervised (for hospital training) by the family planning section chief of the MCH center and the staff obstetricians and gynecologists.

The teaching hospital has obstetric and gynecology and pediatric services, a well-baby clinic, and a public health nursing section. Family planning services are provided routinely, and 5,500 babies are delivered annually.

Six of the staff attended a 1972 family planning seminar for nursing college staffs by the National Health Administration. Subsequently, the school organized another seminar for vocational nursing and midwifery school faculty.

This unit could receive consideration for help in (1) improving and expanding its teaching content and methods, particularly in the classroom; (2) strengthening the role of health educators in its postpartum program (perhaps in connection with NNU); and (3) continuing its in-service seminars. At present the National Health Administration and the committee are becoming active in (3), but items (1) and (2) should be monitored to determine when and if small-scale inputs from other local agencies (or from abroad) might best be made.

#### National Normal University

National Normal University, established in 1946, is also located in Taipei City. There is an enrollment of 8,443 (5,914 day, 2,529 evening) and a faculty totaling 739 (250 professors, 174 associate professors, 140 lecturers, and 164 assistants). The university consists of a School of

Education (nine departments), School of Arts (seven departments), School of Science (four departments), Graduate Institute (nine departments), and an Evening School (nine departments). It is the main teacher training institution for middle school teachers in Taiwan. Tuition and living expenses for all students are paid by the government, and the student's obligation is a one year's teaching assignment after completion of four years of class work for a bachelor's degree. There are affiliated middle schools for students' teaching practice. The university also organizes in-service training courses for middle school teachers.

The department of health education in the School of Education has shown interest in population and family planning since 1966, and has offered a course in the population problem and family planning as an elective since 1968. The course is conducted by a group of "experts" from the Taiwan Provincial Committee on Family Planning (Taichung). Some twenty-five to thirty are enrolled each year.

Professor S.P. Lee, the former chairman and now dean of the evening college and head of the university health center, has been actively interested in population and family planning for many years. He is a physician with a recent M.P.H. in health education from the University of California School of Public Health at Berkeley. Two of his goals since returning from Berkeley have been to add more social science courses into the health education curriculum (which has been largely physical and school health-oriented) and to begin population education projects in the schools.

He has worked on a national committee to review textbooks at the primary and middle-school levels to find ways to integrate population education concepts, and currently, in his capacity as chairman of the National

School Health Association (NSHA), is planning a pilot population education course for Provincial Taipei Teacher's College. He is also planning a pilot KAP survey of Taipei City Primary School fifth grade students, teachers, and parents, for which a small grant has been made by the Asia Foundation. Professor Lee has received considerable encouragement from the Population Council, and the resident education consultant, Ms. Cernada, has taught a course in this department for the past two years. In addition she has worked on textbook revision with the NSHA and with NNU on questionnaire construction for the pilot KAP study.

At present, the major needs for upgrading the quality of public health educators being provided to the public health system are two: enriching the curriculum in terms of social and behavioral science course work and providing adequate field supervision during the first postgraduate year of "apprenticeship" training in public health settings. Filling the first need will be difficult unless key people are groomed and fellowship courses (few since United Nations departure) found. The second could be handled with a small grant to cover supervisory costs by the Provincial Health Department and would be a good investment in trained manpower. At present, because of the shortage of physicians in public health, health educators (graduates of NNU) are in many of the key public health administrative and educational posts on the island. A major component in field training should be family planning, and some dozen students could be placed annually in the twenty health bureaus for field training. Health education spots are not filled at health bureaus, since most go to headquarters level at Taichung or Taipei.

At present, there are about forty-five units of required courses that all NNU students must take. It would be desirable if population educa-

tion units could be integrated into these courses, or if students from selected departments who are likely to deal with population and family planning areas after graduation (such as home economics, geography, biology, and social education) could be encouraged or required to take the population and family planning course. At present, it is restricted to those in the health education department. Although the Health Education Department is active outside the university in the population-family planning area, it has not done much to promote activities or interest elsewhere in the university.

The Taichung Committee on Family Planning staff have served well as teaching resources, and the present course ought to be expanded to cover other departments. Possibly, the committee could be involved more, since they represent the most well-trained population and family planning resource unit. Some incentive would have to be provided since distance and present workload would be barriers.

The interest in textbook integration of population education concepts, survey of students, and teacher training is a good start. At present, the health education department lacks faculty with population training, and there is no faculty person at the university with advanced training in population. (One fellowship applicant to the Population Council for 1973-74 was turned down recently. She hoped to take her M.A. in health education with an emphasis on population and family planning.) Thus far, the quality of the textbook revision and related work has been less than it might be if more adequate local resources were available.

There is also an associate health center directed by Dr. S.P. Lee, providing counseling and family planning guidance to both faculty and students.

National Defense Medical College

About 100 physicians are graduated annually, all educated at government expense. After graduation, the doctor must serve a minimum of ten years military service.

Dr. Julia Tsuei began an intensive MCH demonstration project with heavy United States and local funding several years ago. One aspect was to integrate family planning into the medical schools. This succeeded at NDMC and a description of the curriculum follows.

Family planning is part of the medical school curriculum in the following ways: Second-year students receive eight lecture hours on population dynamics incorporated into sociology; fourth-year students are given five lecture hours as "cultural aspects of family planning" as part of social anthropology and eight hours on "family life" as part of gynecology. Fifth-year students receive four lecture hours on the relationship of population studies to public health as part of public health.

In addition to these classroom hours, fifth-year students receive, as part of their clinical practice in gynecology, a two-hour demonstration lecture on family planning and a full day of observation in the Veterans General Hospital (VGH) family planning clinic. They also spend a day observing the family planning clinic at the NDMC Health Center. The sixth-year (internship) students rotate through obstetrics and gynecology at VGH for a month, one week of which concentrates on family planning for both outpatient clinic patients and postpartum patients.

Thus, each student has seventeen lecture hours in population as well as twelve hours of family planning lectures and eight hours of family life education. About two days of observation are spent in the family planning clinics by both clerks and interns. Two books in English were prepared

for texts: Family Planning Methodology and Family Life Teaching Guide.

Unfortunately, this center has not been able to serve well as a demonstration center to other medical schools because of its unique situation as a trainer of military physicians.

#### Kaoshiung Medical College

The only major medical college located in the south is in the second largest city, Kaoshiung. Enrollment in 1972 was 1,853, and there were 263 graduates. In 1971 there were 808 medical students and 63 were graduated. There are 103 full-time and 63 part-time faculty. The school began in 1954.

Relevant material is included in such courses as public health and gynecology, but the school has done no review of how it is integrated or to what extent. Two public health courses with family planning content are offered (organized by outside faculty): one for nursing students (there are about 300) and another for medical students. The course for nurses has a four-hour bloc of classes on family planning methods and three hours on population policy and problems, taught by Provincial Health Family Planning and MCH institutes staff. The public health course for medical students is organized by Dr. K.P. Chen, who designed the seventeen-hour population and reproductive medicine course at NTU. It has two hours devoted to family planning. In addition, family planning is part of the clinic and public health institution field training.

Dr. Chen might be encouraged to help begin a review of course content at Kaoshiung and to initiate a course similar to NTU's for fifth-year students.

#### Taipei Medical College

Located in Taipei City, the Taipei Medical College has 2,915 stu-

dents (2,242 day and 673 evening), and 466 were graduated in 1972. In that year there were 883 medical students and 117 graduates. Some 798 were graduated from 1966 through 1972. There are 141 full-time and 147 part-time faculty. The college was founded in 1960.

The college instituted a four- to six-hour lecture on factors affecting fertility control and a four-hour lecture on family planning methodology in the early 1970's. The lectures were provided by Dr. Julia Tsuei, director of the NDMC College Obstetrics and Gynecology Department.

#### Demography and Related Social Science

Closely associated with the National Taiwan University, but structurally independent, is the Academica Sinica, a set of nine government research institutes with its own campus on the outskirts of Taipei. Founded in 1928 in Nanking, the Academia Sinica moved to Taiwan as the Communist government came to power on the mainland. Both in the past and at present, the thirty-one research institutes at NTU and the Academia Sinica comprise the most prestigious research organizations in the country. All carry out both academic and applied studies, but they offer no training except research experience for advanced students. However, most staff members teach at the National University.

There is little social science population training or research in the country's universities except for the National Taiwan University. And here the interest is recent except for two courses and some studies of migration and urbanization begun a decade ago in the Sociology Department.

In 1973-74 several population courses had recently been instituted at NTU. A course on principles of population, covering both population problems and methods, is given for (and may be required of) all students in

their first two years. A course on population trends in China is open to juniors and seniors. Sociology has an undergraduate course in population policies as well as courses in urban sociology, problems of youth, problems of aging, and child welfare, in which some use is made of demographic data and concepts. The Department of Agricultural Extension in the Faculty of Agriculture emphasizes rural sociology and agricultural economics. This department offers four undergraduate population courses: demography, population censuses, rural population, and human migration. Another course, the social psychology of population, is being developed in the Department of Psychology. Economics offers undergraduate, one-semester courses in population and economic development, manpower, manpower and resources, and urban economics. In the Faculty of Public Health there are courses in reproductive biology, family planning, population and public health, and human ecology.

The expansion of courses in population at NTU is related to current attempts to establish a university center for population studies. The center is to be multidisciplinary, including all interested departments. It will have research and service functions and its members will offer population courses through their respective departments. Initially, funding for a center was expected from UNFPA, starting with the Agricultural Extension Department. The forced removal of Taiwan from the United Nations ended this possibility. However, efforts to secure alternate funding are going forward. In October 1973 formal approval of a Preparatory Committee on a Population Research Center was given by the president of the university. Ultimately, approval by the Ministry of Education is needed and expected, but the center can operate meanwhile with funding secured from outside sources. So far seven departments (Agricultural Extension, Anthropology, Economics, Law, Psychology, Public Health and Sociology) are cooperating.

Although the focal point for the center is population, the emphasis and research efforts are better defined as behavioral than demographic. The main research study so far, funded by the Population Council, focuses on determinants of family size and son preference in Taiwan, including a separate examination of the psychological, economic, social, and cultural factors involved. In addition, members of the Agricultural Extension Department are studying rural-urban migration, including the migration of rural youth, changes in Taiwan's agricultural population, problems of agricultural labor and similar topics, with support from the National Science Development Council or with their own resources.

At the Academia Sinica further population research is being carried out within two institutes. One is the Institute of Ethnology, which numbers among its interests Chinese social studies and, within that, studies of Chinese population at the community and family level. The other is the Institute of Economics, which includes a population division. The latter has four full-time members and is headed by a Chinese demographer with an American Ph.D. The focus of interest has been on labor force studies, but increasing attention is being paid to population and development relationships. Completed research also includes a study of mortality levels and trends, an examination of differential fertility in Taiwan, and an evaluation of the national family planning program. Several members of the institute are actively involved as advisors to various government agencies on development and economic planning.

Tunghai University in Taichung offers a three-hour undergraduate course, introduction to demography, each semester in the Sociology Department. This is taught by a "committee" of three staff members from the Chinese Center for International Training in Family Planning. One has an

M.A. degree in demography and one a Ph.D. in sociology-demography, both from United States universities. In addition, the chairman of the Sociology Department, an American, teaches an undergraduate one-semester course in urban sociology, which has some population content. Tunghai University is a private school with international Christian backing. It has Colleges of Arts, Science, and Engineering, with a total enrollment of around 1,600 students, all undergraduates. About one-fifth of the staff are expatriates, mostly American. A small grant from the National Science Council of China has allowed one faculty member to carry out a migration survey in Taichung, with an article (in Chinese) published.

The chairman of the eleven-man sociology Department at the National Chung-Hsing University in Taichung currently offers a one semester substantive course in population for undergraduates. This university has Colleges of Arts and Sciences (in Taipei), Engineering, and Business Administration with a total enrollment of 8,600 students. A grant of \$10,000 has been made by the Asia Foundation to develop models of communication of family planning knowledge.

Within the Ministry of the Interior, the Population Division is responsible for population registration, including registration and publication of vital events. With the close cooperation of the University of Michigan's Population Studies Center, the division is responsible for both the Demographic Monthly and the annual Demographic Year Book, both of which provide basic compilations of population statistics for the country and its subdivisions. In addition, analyses of fertility data and of projects intended to improve vital registration are undertaken.

The Chinese Center for International Training in Family Planning, located in Taichung, has conducted a number of action-research projects

designed to compare fertility trends under varying conditions. Analyses of the results have been made at the center, which has also carried out research on fertility trends and KAP studies of family planning in Taiwan. Evaluation of the statistics from the national family planning program is also a continuing activity. The University of Michigan has been continuously involved in all of these.

#### V. CONCLUSIONS

Overall, research on Taiwan's population trends, and particularly on fertility, has benefited from the existence of high-quality data, from the substantial involvement of expatriate demographers from Michigan, and from the underwriting of the cost of a sizable part of the action-research program by the Population Council. Less happily, population research has been developed over the last decade largely outside the country's universities. Thus, training in population has not been stimulated at the college level by ongoing research projects. Only within the last two years, as interest has developed at National Taiwan University, has this situation begun to change. A few Taiwanese have now received or are working toward graduate degrees for study abroad in demography or in related fields with a population specialization. On the assumption that expatriates cannot continue to carry on indefinitely, the need to develop further a strong native group of population experts and to promote strong local centers for research and training can be emphasized.

Taiwan's population and family planning program has been remarkable in that, unlike most countries, it developed without the participation of the academic community. Foreign fellowships trained the most promising persons for top leadership, foreign technical assistance (from the Population

Council and the University of Michigan) was available to fill technical gaps, and the program trained, on the job, most of the middle-level people it needed. The program itself was operated from Taichung, three hours away from the site of the principal university. Because the academic community was not involved, the academic medical profession has been, at best, indifferent to the program and has occasionally been opposed to it. In addition, the lack of academic involvement has meant that there was no supply of trained persons available to the program, nor was there any academic-based research in, or challenge to, the program.

Under these circumstances, it would seem worthwhile to consider some form of institutional support for the public health complex (Department of Public Health, the Institute of Public Health, and the School of Public Health) and for the medical school at National Taiwan University, possibly through fellowships and research grants.

SOURCES OF INFORMATION

Site visits by E. Ching-ying and G. Larnada, January-March, 1974, and Vincent E. Whitney, February 1974.

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THAILAND

Clifford A. Rosentfield, Nicholas H. Wright,  
and Vincent H. Whitney

1. COUNTRY SETTING

Thailand is a predominantly rural southeast Asian country whose 1973 population was estimated at 56.9 million. The first Thai census, completed in 1961, reported a population of 47 million. The growth rate is approximately 1.8 percent a year. Some pertinent demographic, social, and economic characteristics follow:

Population (in millions)	
1972 estimate	38.4
1985 projection	57.7
Rate per 1,000 population (1971)	
Births	41
Deaths	11
Natural increase	30
Percent distribution of population by age (Year)	(1970)
All ages	100
Under 15 years	44
15-64 years	33
65 years and over	3
Dependency ratio	89
Females aged 15-44 (1972 estimate in millions)	
Total	8.1
Married	5.0

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\*Source: Dorothy Nortman, "Population and Family Planning Programs. A Fact-book." Reports on Population/Family Planning, 2, The population Council, 1973.

Density (1972 population/sq.km)	75
Percent urban of total population	
1970	15
1985 (projected)	19
Percent literate	
Male	) 82
Female	)
(Year)	(1970)
(Age group)	(10+)
Percent of eligible age group in school	
(Primary school age group)	(7-13)
Male	82
Female	76
(Secondary school age group)	(14-18)
Male	13
Female	10
(Year)	(1968)
Population (in thousands)	
Per physician	11
Per nurse	5
Per midwife	11
Per hospital bed	1.2
(Year)	(1970)
Gross domestic product (GDP)	
Per capita in US\$ (1970 or 1971)	197
Percent derived from agriculture (recent year)	29
Annual percent increase in real GDP	
Total	8.4
Per capita	5.1
(Years)	(1965-70)
Per capita food production, 1969-71 average index (1959-61 = 100)	123

## II. POPULATION POLICIES AND PROGRAMS

In March 1970 the Thai government announced a national population policy to reduce the rate of natural increase from over 3.0 percent in 1970 to 2.5 percent by 1976, through implementation of a national family planning program under the Ministry of Public Health.

III. UNIVERSITY AND INSTITUTIONAL DATA

Health and Family Planning

Chulalongkorn University

Chulalongkorn University is public and run by the central government (as are all universities in Thailand). It's single campus is in the center of Bangkok. It has several research institutes, including the Institute for Population Studies, Social Science Research Institute, and WHO Research Team for the Clinical Evaluation of Fertility Regulating Agents. All come under the authority of the rector of the university, although the WHO-affiliated center also has direct links to WHO in Geneva. It has good library, classroom, and laboratory facilities, and a computer center.

WHO-affiliated research center has three long-term WHO team members (a pediatricist, a gynecologist, and, until recently, an obstetrician-gynecologist) and several short-term consultants. There are several Thai counterparts from various departments of the medical school, particularly from the Department of Obstetrics and Gynecology, as well as some of the preclinical science departments.

The Family Planning Research Unit is well-known to the Council through the postpartum program.

An internal proposal for a Medical Research Institute is being looked at favorably, in which the WHO-Chula and family planning units would form the first section. This should be looked into and may be a place for Council support in the future. They also hope to eventually link up with the IPS.

There is interest in population in other parts of the university, including the Faculty of Education, Faculty of Mass Communications, and Faculty of Law.

The institutional leaders are Dr. Visid Prachuabmoh at IPS; Dr. Charanpat Israngkun, Head of the Department of OB-GYN for the medical programs with Dr. Nikorn Dusitsin for the WHO-Chula Center and Dr. Aree Semboonsuk for the Family Planning Research Unit. Both Dr. Visid and Dr. Charanpat relate to the pertinent deans (Political Science and Medical School) and the rector relatively well. There are jealousies within the schools and the university in relation to the large amount of foreign money coming in for population from the donor agencies and relatively little elsewhere within the university. Nonetheless the relationships, which in Thailand are based primarily on the personal side, are relatively good. It is difficult to say how influential they are. Lectures and courses are being introduced into other departments. Within their own units they are very influential, outside, it is difficult to know.

The plans for a medical research center are underway, with the Family Planning Research Unit and the WHO-Chulalongkorn Research team providing the impetus. A large number of clinical studies have been conducted in the past and are planned in the future. Along with the Department of Obstetrics and Gynecology, and, in part through the new WHO-Chulalongkorn Research Team, several of the preclinical departments have shown an interest in basic human reproduction research. There are a few basic scientists who have been trained abroad through Ford or Council support. There has been talk of a linkage between the medical and demographic groups for a university-wide population center, but this is still in the early stages of discussion.

Mahidol University

There are two medical schools and both have active family planning

programs. The oldest is at Siriraj Hospital where a good Family Planning Research Unit operates under the Department of Obstetrics and Gynecology. The Council supported a postpartum project at the unit, as well as other research studies. Dr. Suporn Kowisawant is the head of the unit and perhaps the most careful and effective clinical researcher in Thailand. He is highly respected both at home and abroad and is interested in cooperating with the Institute's family studies. The medical students have some introduction to population and family planning through contact with this unit and also through courses in the departments of Obstetrics and Gynecology and Preventive Medicine, but the teaching does not appear to be innovative or particularly well-organized. The Physiology Department and others have some scientists interested in human reproduction, and some research activities are underway in this area.

Samutthani Medical School is new, initially receiving students in 1970. It is somewhat unusual in that the school covers only the last two years of medical school. The Faculty of Medical Sciences covers two years of pre-medical school, science and health courses in medical sciences, following which the students move to Samutthani. There is a partially successful attempt to coordinate the teaching of the medical students during the first and second halves of their education. The Department of Obstetrics and Gynecology and the Community Medicine Program (an interdepartmental program supported by the Rockefeller Foundation) bear most of the responsibility for the teaching of the medical students in the fields of population and family planning. These programs probably provide the best preparation in these fields of any of the medical schools. There is a sincere interest in the problem, and the students seem to be responding to the courses, as evidenced by the formation of a

student "Ecology Action Group," with population as one of their top priorities.

Thus at Mahidol there is a moderate amount of activity in the field and potential for a university-wide program, with the Institute for Population and Social Research serving as the central coordinator. The present rector, Dr. Kasarn Chartikavanij, is very supportive of these activities, although he may be retiring soon. There does not seem to be a role for the Population Council at this university except to fund individual research proposals. Finally, both within the Department of Obstetrics and Gynecology and in the preclinical science departments of the Faculty of Medical Sciences, there is interest in and research underway in the field of human reproduction. The Rockefeller Foundation has provided major support to the Faculty of Medical Sciences through the provision of a large number of fellowships for study abroad at the Ph.D. level, plus the assignment of American professors to head and staff the various preclinical departments until the return of the newly trained scholars. Most have now returned, and the foundation is in the process of phasing out its visiting professor program. Among those who have come back are a number of persons interested in research in the field of human reproduction, in the departments of microbiology, physiology, pathology, and others.

#### Chiengmai University

The fourth medical school in Thailand is located within Chiengmai University. There is an interest in the field in the Department of Obstetrics and Gynecology and also the Department of Preventive Medicine. The Faculty of Political Science provides courses on demography. The dean of the faculty is one of the original supporters of population related activities in Thailand, having worked in the early sixties with General Netr Khemayodhin, then the

undersecretary of the prime minister's office and the head of the government's committee to study the population problem. There are no formal programs nor any degrees offered.

Existing activities in research and research are limited, varied in quality, and apparently uncoordinated. However, there is evidence of renewed attempts at coordination. An attempt at interdepartmental involvement with the Provincial Health Office from 1966-1972 was not successful, and people now seem to be going their own way. Because of past history and the general thinness of staff, successful coordination is not likely to happen soon.

The rector, Dr. Was, has a strong interest in the teaching and practice of community medicine and was a leader in starting the Chienmai Sarzpi Project in 1966. It was a project designed to study ways of integrating malaria eradication activities with general health services. It also had the objective of studying rural health problems in order to improve health services and to help the government to solve health problems. The project was successful in that it drew the medical and nursing students into the community and into the health services. For a number of reasons, the project was unsuccessful.

The dean of the Faculty of Medicine, Dr. Tawar, spoke of starting a separate unit to coordinate all family planning and population activities of the faculty. A committee has been named, but has not met and, as yet, there is no special funding for this activity. Dr. Tawar seems interested in population and family planning activities, but with his heavy teaching commitment and his administrative duties, it appears that progress will be slow.

The Department of Obstetrics and Gynecology has eight faculty members, including a chairman, an associate professor, three assistant professors and

three lecturers. The department runs a daily family planning clinic which promotes postpartum contraception and provides services to all who are interested. A full-time nurse at the clinic makes ward rounds to encourage acceptance among delivery and abortion cases. All medical students and obstetric residents are involved in family planning activity at the clinic. Clinic activities are supported by regular hospital funds, with the National Family Planning Program of the Ministry of Health providing some equipment and contraceptive supplies. Research activity at the clinic appears to be minimum. A study of the mini-pill has been discontinued. Currently, the chairman, Dr. Amnawsvasti, is carrying on a study of DMPA which appears to be a conventional clinical trial. There is some interest in going beyond the clinic into the community, but little interest in a research program. Clinical family planning experience seems to be of good quality and medical students are well-exposed.

One member of the department, Dr. Kosin, is the most interested, as well as the best qualified, person to conduct research. He is currently working part-time at the Chiangmai-St. Louis Malnutrition-Anemia Center, principally working on the biochemistry of malnutrition among pregnant women.

The Department of Preventive Medicine has a chairman, six positions at the associate or assistant professor level, eight public health nurses and four sanitarians. The combined teaching load of the department is approximately 160 lecture hours per term, with students exposed during all six years of their training. The department plans to open a model community medicine teaching clinic next year separate from the hospital out-patient department. Currently the department runs a well-baby clinic twice a week in which family planning is discussed with attending mothers. All students of the medical and nursing schools are exposed to this clinic. A university committee is now considering the question of whether fifth and sixth year medical students should receive more

exposure to activities in first class health centers and provincial hospitals, especially including family planning activities. The aim would be to orient medical students to key rural health problems.

The department maintains a mobile clinic giving contraceptive services in the rural districts. A student can participate in this activity but they don't do so regularly. The mobile clinic staff are evaluating complications of pills and IUD's, and are giving some oral practices before and after accepting family planning. They also give injections in selected cases. Funding for the mobile services first came from IPPF, but now from the department.

#### Other Universities

The new universities, Chiang Mai and Songkhla, in Khon Kaen and Songkhla will be developing medical facilities soon. They both hope to gear the medical education programs to the needs of rural people. WHO is providing some assistance, as is SIDA, especially in basic population and family planning. It is felt that it is essential to explain to these two universities as they develop their services, particularly in rural areas.

#### Recommendations

The Thai family planning effort, now mostly centered in the Ministry of Health and directed from Bangkok, would benefit greatly from more involvement by the provincial medical schools in Chiangmai, Khon Kaen, and Songkhla. Interest at the latter two institutions is still not clear, they were not visited in this survey because both are just beginning to train medical students. At the moment their preoccupying problems are budget and attracting and holding a talented teaching staff. Chiangmai is further along, although thinly staffed, and there is interest in population and family planning, both in basic research, service demonstration, and training. The interest is scattered through various

departments, but may be coordinated effectively through the dean's office in the near future.

Current institutional development efforts in the Bangkok medical schools demonstrate their value, actual and potential, to the National Family Planning Program. Ramathibodi Medical School, assisted by the Rockefeller Foundation over the past five to ten years, is conducting a training program in tubal ligation and vasectomy for government health officers. Both the training activities and associated, practical research and evaluation are of great value in formulating and implementing family planning policy. The medical school at Siriraj Hospital has received support from several sources over the years, including the Population Council. Their research on lactation, postpartum demonstration service programs, and on induced abortion is valuable and deserves continuing support. Chulalongkorn Medical School has served the national family planning effort by conducting key training programs and demonstrating the value of mobile services in reaching remote, rural populations. Chulalongkorn Medical School has received support from several donors in the past, and WHO is attempting to develop a regional center for contraceptive development and evaluation, both clinical and field.

Although these general recommendations emphasize the potential of provincial medical school involvement, there are still opportunities for institutional development in Bangkok. It seems likely that an Institute of Health Research will be set up within Chulalongkorn Medical School in late 1974. Although the exact lines the institute will take and its relationships with the various medical school departments are not yet clear, the development is a promising one. There is strong interest in making population and family planning the major institute involvement, and it bears watching over the next months.

Demographic and Related Social Science

Thailand has eight universities, all of which are government operated. There are no private colleges of any consequence. Aside from tuition fees, which are low, the eight universities receive their support directly from the central government through the Ministry of Education. Their students may come from any part of Thailand although the largest number are from Bangkok-Thonburi metropolitan area and from central Thailand where the concentration of population is greatest. Applicants for admission take standardized tests, and those with the highest scores will normally receive first choice of schools. For the great majority this will be Chulalongkorn University in Bangkok, the oldest and most prestigious of the eight. The other universities, which essentially have been developed during the last twenty-five years, are: Mahidol University, Thammasat University, and Kasetsart University, all in Bangkok, Chienmai University, Chiang Mai, Khonkaen University, Khonkaen, Prince of Songkla University, Hatyai-Si Racha and Pattani, and Ramkhamhaeng University in Bangkok.

The first University, Ramkhamhaeng (RUM) was established in 1911 on the outskirts of the capital. It has become one of the pressure for admission off the remaining schools since it is open to any high school graduate and relatively inexpensive to attend. It is generally viewed as a school for those who cannot get in elsewhere or who cannot afford to go away from home. There are around 10,000 students, all undergraduates. So far there has been no course nor research project in demography. Among the other universities, Khonkaen (in the northeast) has no demographic work but some interest in population education.

Again, there is no research or course specifically in demography at either Kasetsart (the agricultural university) or at Prince of Songkla. At the

former there is a course in community development in the Department of Sociology which is reported to devote some lectures to population. At Prince of Songkla, Social Sciences form one of five departments in the Faculty of Education, which in turn is one of two faculties on the Pattani campus. The university plans a separate Social Sciences and Humanities Faculty in 1974-75. Its separate departments will include one in economics and one in sociology. The primary service area of the university is the Muslim south. The northern university is Chiangmai. Here too the emphasis is on undergraduate teaching. At this level there are courses in demography and labor economics in the Faculty of Social Sciences and in population in the Humanities Faculty. These are optional for students in five departments but the demography course is required of all majors in sociology. No research on population subjects has been reported. In the remaining universities, Chiangmai, Chulalongkorn, Mahidol and Thamassat, population courses and research have been developed to varying degrees as described below.

There are also government offices that conduct demographic research or provide training in population subjects. The most important of these are the National Economic and Social Development Board, the National Institute of Development Administration, and the National Statistical Office. The Ministry of Public Health is responsible for the operation of Thailand's family planning program. It has an evaluation unit that regularly analyzes program statistics and reports from time to time on fertility trends in the country as a whole, or for regions, or among particular groups in the population. The National Research Council arranges for implementation of projects sought by other government agencies. During the latter half of the 1960's its Social Science Division served as official sponsor for two demographic advisors provided by the Population Council and also for several population studies of fertility and natural

increase in Thailand.

Bangkok is the site of the Economic Commission for Asia and the Far East (ECAFE). This United Nations organization has had a Population Division for several years. It has its own sections on general demography and fertility and family planning as well as a clearing house and information section. A technical adviser on population is attached to the Division. Population research on the region is regularly carried out through a series of regional training seminars or organized. Visiting scholars in demography and related fields are frequently invited to participate in ECAFE meetings and are consequently a resource for consultation on population research and training activities for Thai organizations.

#### Chulalongkorn University

Demographic research and training in Thailand began at Chulalongkorn University which serves as a central center for such activities. Beginning in the mid-1960's the first course-based and graduate program in the university was realized. This was a master's program in the Department of Sociology with a population specialization. At the same time a population research center was set up. Both projects were under the direction of Thailand's first demographer, a Ph.D. from Chicago. Subsequently, demographic research and graduate training were removed from the Sociology Department to what is now the Institute of Population Studies. The IPS has been given official status within the university and approved by Thailand's cabinet. As a result the original director has become its dean. Its status is roughly comparable to that of a faculty, and it has acquired civil service positions and government budget support. However, much of its funding to this point has come from the Population Council, which has provided six advisors, core development support, and funding for its principal

research efforts.

The three objectives of the institute are training, research, and service to other agencies. So far twenty-six M.A.'s have been awarded with all graduates readily placed in IPS, in other universities, and in various government agencies. The master's degree requires two years of study including completion of eight courses in demography, statistics, and sociology. Normally there are about twelve to fourteen students in each entering class, and the supervision of student theses is a heavy burden for the professional staff, which is comprised of about five or six persons in residence at a given time. In addition to their graduate teaching, staff members have also frequently given undergraduate courses in population in other departments and schools. The advisors have all taught introductory population courses within the IPS program.

The institute has had one major research project over the last six years. This is an ambitious national sample survey of demographic change in relation to economic and social change. Two rural and two urban rounds of interviewing were conducted, each three years apart. Several staff publications and masters' theses based on comparisons of data from the first rural and urban rounds have been completed, and these data have also been used in two doctoral dissertations by Thai students at American universities. This large project was initiated with the additional purposes of providing research training for staff and graduate students and to secure information of direct utility in the development of a national population policy. The undertaking has been a difficult one and not without its problems, but it appears to have been successful overall in meeting its objectives. It has also earned the IPS a good international reputation. In the process the institute has by necessity developed considerable competence in data processing as well as building staff for such

operations.

The IPS is also involved in several cooperative research projects, some underway and some planned. It will be the operating unit in Thailand for the World Fertility Survey. This survey in 1971 will also serve as an additional cross-sectional phase of the series of Demographic, Economic and Social Change. Another 1971 project is participation in the international survey of Value on Children, in which the IPS will assist the Ministry of Education. For UNFPA a pilot study of recent marriage patterns is in the planning stage. Other projects include a study of Thailand's laws and administrative regulations which affect population growth, the fertility of Chinese Thais, and a population history, based on existing published data, intended to evaluate the success of adaptation to changing environmental conditions and to consider family planning in similar terms. The university's Medical School has affiliated with the institute and will be assisted with field work, data processing and statistical analysis for some of its research being undertaken with WHO support. Finally, IPS is cooperative in several projects originated by persons in other organizations. These include a study of migration and urbanization (with Brown University), a test of models on the economic determinants of fertility (with the ILO), and a survey of rural manpower and agricultural employment conditions (with the National Economic and Social Development Board).

In other parts of Chulalongkorn University an undergraduate course in demography is required of all sociology majors and is optional for students in other departments of the Faculty of Political Science. Demography is an optional course for students in the Faculty of Education.

#### Mahidol University

In 1969 the former University of Medical Sciences in Bangkok became

Mahidol University. The change in name involved a specific intention to emphasize social sciences as well as medicine and public health, an intention that is now being translated into organizational form. The Institute for Population and Social Research was established as a center within the Faculty of Public Health in 1966. Financial support was provided by the Rockefeller Foundation through the University of North Carolina, which supplied a population advisor and other services. Institute status, making it equivalent to a Faculty, was acquired in 1971, and a government budget and civil service positions became available in 1973. Rockefeller Foundation funding is continuing, and institutional development support is being sought in 1974 from various sources.

The professional staff consists of a director (a former Population Council fellow with an American Ph.D.), and three research associates with master's degrees earned abroad. Four other staff members are now in the United States for doctoral study and two additional training fellowships are available. There is a population advisor, also an American, serving a five-year appointment. In addition, there is one research assistant plus small administrative and support staffs. A Ph.D. in anthropology and a graduate student in sociology, both from North Carolina, are at the institute for two-year periods under the Frederiksen interns program. The director assumed a full-time position with the institute in February 1974, after resigning from the National Statistical Office.

One of the stated aims of IPS is to provide short-term specialized training through seminars and workshops, three of which have been held. However, there is no regular course of population study at the institute. Instead, staff members offer courses in demographic analysis and in public health research methodology to students in the School of Public Health. The

Director also teaches a population course at the National Institute of Development Administration. Another course in population is given there and to public health students by the chief of social sciences, who is slated to be head of the Sociology Department when that is organized. He is a Thai with a recent American Ph.D. in sociology-demography.

The institute has so far engaged in a limited number of research projects, but such activity is expanding. The emphasis of these has been on fertility and family planning, particularly in the context of public health services. Under a Rockefeller Foundation grant a RFP survey and study of fertility trends was carried out in Banabden, a suburban area of Bangkok with a sizable Chinese population. A USAID contract with North Carolina has supported a field worker evaluation project, which has sought to determine what worker characteristics were associated with highest levels of recruitment of rural married women to the practice of birth control and whether paramedical personnel could be used successfully to win acceptors. This project was done in cooperation with the National Family Planning Program in the Ministry of Public Health. Other studies are (1) a pilot project on condom acceptability and efficient distribution in a rural community, (2) a survey of attitudes toward vasectomy among 185 men who had undergone the operation in the previous three years, (3) a study of the types of medical practitioners and services used during pregnancy in an area near Bangkok, and (4) an examination of the effectiveness of various methods of dispensing information and motivating families to use birth control in one community. Institute research is programmatic in nature.

Elsewhere in the university, the chief of the Department of Education in the Faculty of Social Sciences and Humanities is developing a sizable program in population education for primary and secondary schools in cooperation with

the Ministry of Education. This includes a Journal of Population Education, which has already been launched. The chief proposes an M.A. training program in educational development (by which population education is meant) to start in 1975. Four faculty members are now in the United States and one in India in training for this program and to form the nucleus of a new Faculty of Education expected in a year or two.

#### Thamassat University

Thamassat University in Bangkok has traditionally had large enrollments of undergraduate students, made possible by the fact that the majority came to the campus only occasionally, primarily for examinations. Recently this form of open attendance has declined, particularly because of the growth of Ramkhamheng.

Courses in population are taught to undergraduates in three faculties. A one-semester course titled Demography is compulsory in the Faculty of Political Science. In the Faculty of Social Administration, An Introduction to Population is compulsory for sociology majors. The same course plus two others, Population Dynamics and Population and Manpower, are optional for students in any department in this faculty. In the Faculty of Economics there is an optional undergraduate course on manpower and an optional course in economic demography for masters' candidates. The latter is now taught by the demographic advisor to the National Economic and Social Development Board. In 1973-74 it was chosen by eighteen students, which is considered a large class. It is expected that in the future this course will be given by a Thai faculty member who is qualified to teach it.

In the population area several small research studies have been

completed. Typical are a study of migration patterns in two districts of Udorn Province, research on a squatter area of Bangkok, and student studies of the extent of family planning acceptance in relation to the level of development in local rural areas. There is no population research center at the university. Some theses with a population content are done by masters' candidates in economics. The latter program is generally regarded as a prestigious one and its graduates are sought by both Thai and foreign firms. It combines courses in general economics and in commerce.

#### National Institute of Development Administration

NIDA offers specialized training for government employees and others who occupy or aspire to administrative, administrative or teaching positions in organizations or programs related to national development. Over half of the students are already in government jobs before entering. The institute's normal costs are covered by the government, but it must seek outside funds to cover all other needs. In this connection it has received \$2,000,000 in institutional development support from the Ford Foundation under a grant that is now in its last two years.

The institute has its own campus on the edge of the city. It is divided into four schools, those of Business Administration, Public Administration, Economic Development, and Applied Statistics. The last of these schools has four departments, Mathematical Statistics, Operations Research, Computer Data Processing, and Population Research. The chairman of the latter is the dean of the Institute for Population and Social Research at Mahidol University. The department has one other part-time member from Mahidol. NIDA and the institute at Mahidol University are cooperating. Mahidol exchanges assistance for NIDA's training program for small research funds, which NIDA has available

and Mahidol does not. The arrangement is expected to continue at least until three NIDA staff members have completed demographic training now in process in the United States. The Department of Population Research has been in operation for two years and presently offers two courses, Demography I and II, which combine substantive and technical materials. Later it is planned to add specialized courses in migration, mortality, fertility, and other population topics. Students in the department must also take four basic statistics courses -- algebra, advanced calculus, and two courses in mathematical statistics.

So far NIDA has not carried out any population research, which is not surprising given the lack of any full-time demographers on its staff. There is a fairly large library, but it lacks books on demography. There are also funds for a computer, but one has not yet been set up. A Control Data 1700 is being purchased. The dean of the School of Applied Statistics is interested in developing a research program emphasizing demographic statistics. He himself is the former associate director of the National Statistical Office and holds a Ph.D. degree from an American university.

In the School of Economic Development, A.B. and M.A. degrees in Development Economics are given. There are two optional courses with a population content, Population and Economic Development and Seminar in the Economics of Manpower. In the certificate course in applied statistics there is an optional course in Techniques of Demographic Analysis. Many short-term training programs on a variety of subjects have been held at NIDA for government officers, businessmen, military personnel and other groups. When staff permits, such programs on population subjects could be held for similar groups of government and other employees.

National Statistical Office

The National Statistical Office is involved basically in the collection, processing, and publication of data, including population statistics. Demographic work is done primarily in the Population Survey Division. Thus the office is presently a resource agency for research rather than an organization equipped to carry out analytical studies itself. It has not developed any series of census monographs or program of publications beyond the presentation of the basic data.

National Economic and Social Development Board

The National Economic and Social Development Board is an independent government agency which provides data on various economic and social conditions and requirements in such areas as trade, employment, rural life, manpower, and education. It is concerned directly with the formulation of the government's development plans. This has included the drafting of population policy statements which have been accepted by the cabinet for inclusion in development plans.

NESDB has several divisions, one of which is Manpower. A small population unit has existed within this division since 1968 although its status is unofficial. There is a possibility that reorganization of the board in 1974 will include the formal establishment of a Population Division, which could more readily serve all other divisions of the agency and not be limited principally to Manpower.

The present population unit has four members, one of whom returned in 1973 with an American M.A. degree in sociology-demography. Two others are now studying for the Ph.D. in the United States. The unit has had a demographic advisor since 1969, provided by the Population Council. Much of the research conducted by the unit has involved preparation of in-house materials such as

population projections for use in development planning and the establishment of population policies. Other studies have been on manpower, population change in rural areas, and population and education.

NESDB does not run any kind of regular training programs in demography. In 1974-75 it is, however, organizing and conducting six short seminars on Thailand's population trends and their causes, and on national population policies and means to implement them. These seminars are being held in six different regions of the country for provincial governors, mayors of cities, provincial health directors, and other important persons. Such training is designed to produce a better understanding of Thailand's population conditions and of the policies which have been established to cope with these. It also seeks to enlist local leaders in the effort to implement government policies.

#### IV. CONCLUSIONS

In 1963 Thailand held the first of three national population seminars to examine its population trends and to consider whether these presented any problems or required any action on the part of the government. Prior to these meetings, there had been almost no public concern with population in the country, and demographic research and training were nonexistent. Ten years later Thailand has an official policy to reduce high rates of natural increase, it has a countrywide family planning program, and population research and training have increased markedly. A population center has been established at two leading universities and each has received official status, civil service positions and other budgetary assistance. The development of research and of graduate training in demography has in fact influenced education in other fields quite substantially.

There are considerable changes in a decade. They must be seen against continuing weaknesses, of which the greatest is the shortage of trained manpower. This shortage is being lessened by the M.A. training program at Chulalongkorn and by the provision of a number of fellowships for staff or individual training abroad. A few scholars have already returned with advanced degrees, but there will be a continuing need for training over a period of years, and for the spread of persons with training to more schools or more schools. In this respect Thailand is not unlike many other countries in South and East Asia.

The need for demographic research as a basis for social planning and policymaking is better understood in the National Economic and Social Development Board than in its counterparts in the majority of countries in the region. It is important to reinforce this understanding by upgrading the present Population Unit within the agency to divisional status and by making certain that population planning is an aspect of all development planning. The latter will in turn require more extensive and adequate demographic research to be carried on within an expanded unit.

#### SOURCES OF INFORMATION

Site visits: Allan G. Rosenfield, January 1973, Nicholas H. Wright, March 1974, and Vincent H. Whitney February and March 1974.

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