asian and pacific
census newsletter
east-west population institute

VOLUME 1, NUMBER 1 | EAST-WEST CENTER, HONOLULU, HAWAII | AUGUST 1974

census officials meet for third workshop-conference

Participants in the Third Population Census Tabulation Workshop-Conference met 25–30 March 1974 at the East-West Population Institute in Honolulu. The conference, which focused on postcensal considerations, brought together both participants in previous workshop-conferences and delegates from countries not represented at earlier gatherings. *(A list of participants and their affiliations appears on the next page.)* According to Dr. Lee-Jay Cho, conference coordinator, the meeting reinforced the cooperative spirit generated at earlier census conferences. Cho expressed satisfaction that participation this year had been expanded to include delegates from Australia, India, Singapore, and Sri Lanka.

Agenda

Representatives reported on each country's recent census activities, including new publications, progress and difficulties in processing and analyzing census data, plans for the next census, and other relevant subjects. Sessions were held on census evaluation procedures, measurement of fertility and mortality, population projections, measurement of urbanization, measurement of labor utilization, indices of socioeconomic status, and census dissemination. Also discussed were the volume being prepared about Asian censuses and the Asian and Pacific Census Newsletter, which is intended to provide a forum for the exchange of census information in the Asian and Pacific areas.

Recommendations

Conference participants approved recommendations calling for the use of comprehensive census evaluation methods and estimation techniques. They also suggested guidelines for making population projections and urged countries to experiment with alternative methods of measuring certain variables. They agreed that another population census workshop-conference should be held in the spring of 1975 and that representatives from additional countries in Asia and the Pacific should be invited to attend. A tentative agenda for the next conference was planned.

Proceedings

Proceedings of the workshop-conference were published by the East-West Population Institute in April. Single copies of this publication may be obtained without charge by writing to the East-West Population Institute. □

Participants in the Third Population Census Tabulation Workshop-Conference in Honolulu included (kneeling, left to right) *T. Nadarajah, Jack Lawson, Joseph Lee, Sam Baum, Sam Suharto, Abdulmadjid, Lee-Jay Cho. Tun-Yih Lu, Todatoshi Sakai, Mohammad Hafiz Sheikh, Charles Nam;* (standing) *Jay Soo Park, Betsy Gould, Hidalgo Chaves, Norman Ryder, Sadanoni Nagayama, Tony Hart, Chian Kim Khoo, Mike Murphy, Dorothy Fernandez, Chon Sil Kim, Lagrimas Abalos, Fred Arnold, Monica Fong, A. Latif, Ektritra Kohkongka, K.K. Chakravorty, Terry Sullivan, Miroslav Lalovic, Anuri Wanglee, Bahauddin Ahmad, Vasantha Kandiah, and Susan Palmore.*

PARTICIPANTS IN CENSUS CONFERENCE

Participants at the Third Census Tabulation Workshop-Conference hend in Honolulu 25–30 March 1974 were:

AUSTRALIA: Mr. A.L. Hart, Director, Population Census Evaluation and Development, Australian Bureau of Statistics.

BANGLADESH: Mr. Bahauddin Ahmad, Census Commissioner, Ministry of Home Affairs.

CANADA: Dr. Edmund M. Murphy, Assistant Director, Research Projects Group, Manpower and Immigration.

REPUBLIC OF CHINA: Mr. Tun-Yih Lu, Senior Statistician, Directorate General of Budget, Bureau of Statistics.

HONG KONG: Mr. Joseph Lee, Census and Statistics Department.

INDIA: Mr. K.K. Chakravorty, Assistant Registrar General, Office of the Registrar General, Ministry of Home Affairs.

INDONESIA: Mr. Abdulmadjid, Director, Central Bureau of Statistics; Dr. Sam Suharto, Director, Data Processing Center, Central Bureau of Statistics.

JAPAN: Mr. Sadanoni Nagayama, Chief, Tabulation Division, Bureau of Statistics, Office of Prime Minister; Mr. Todatoshi Sakai, Deputy Chief, Population Census Section, Bureau of Statistics, Office of Prime Minister.

REPUBLIC OF KOREA: Mr. Chon Sil Kim, Deputy Director, Bureau of Statistics, Economic Planning Board; Mr. Jay Soo Park, Specialist, Bureau of Statistics, Economic Planning Board.

MALAYSIA: Miss Dorothy Z. Fernandez, Senior Satistician and Deputy Commissioner for the Census of Population, Malaysia Department of Statistics.

PAKISTAN: Brig. A. Latif, Census Commissioner of Pakistan, Census Office, President's Secretariat; Mr. Mohammad Hafiz Sheikh, Joint Secretary, Manpower Division, Ministry of Labour and Works.

PHILIPPINES: Mrs. Lagrimas Abalos, Bureau of the Census and Statistics, Department of Trade and Tourism; Mr. Hidalgo V. Chaves, Chief Statistical Coordinator, Bureau of the Census and Statistics, Department of Trade and Tourism.

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Dr. Lee-Jay Cho, shown here at the Third Population Census Tabulation Workshop-Conference, was named Director of the East-West Population Institute July 1. Cho, who was responsible for organizing the annual census meetings at the East-West Center, developed the widely-used own-children technique for estimating fertility from census data. He earned his master's and Ph.D. degrees at the University of Chicago and joined the Population Institute in 1970. He holds a joint appointment at the University of Hawaii as professor of sociology.

SINGAPORE: Miss Chian Kim Khoo, Deputy Chief Statistician, Department of Statistics.

SRI LANKA: Mr. T. Nadarajah, Department of Census and Statistics.

THAILAND: Mrs. Ektritra Kohkongka, Deputy Secretary General, National Statistical Office; Mrs. Anuri Wanglee, Director, Population Survey Division, National Statistical Office.

UNITED STATES: Mr. Sam Baum, International Statistical Programs Center, U.S. Bureau of the Census; Dr. Monica Fong, Consultant; Mr. John Lawson, Jr., Demographic and Economic Analysis, Agency for International Development, Department of State; Dr. Charles Nam, Director, Population and Manpower Research Center, Institute for Social Research, Florida State University; Dr. Norman Ryder, Senior Fellow, East-West Population Institute; Mr. Robert Schmitt, Department of Planning and Economic Development, State of Hawaii; Dr. Teresa Sullivan, Department of Sociology, University of Chicago.

Research interns participating in the conference were: Ms. Vasantha K. Kandiah, Department of Statistics, Malaysia; Mr. Nam Il Kim, Bureau of Statistics, Economic Planning Board, Republic of Korea; Mr. Miroslav Lalovic, United Nations Fellow, Yugoslavia; and Mr. S.Ş. Made Mamas, Central Bureau of Statistics, Indonesia.

East-West Population Institute Staff who attended the conference were Dr. Lee-Jay Cho, conference coordinator; Mr. Keith Adamson, Dr. Fred S. Arnold, Dr. Dennis Chao, Ms. Virginia Dolan, Dr. Griffith Feeney, Ms. Milann Gannaway, Dr. Robert W. Gardner, Ms. Betsy Gould, Mr. David Johnson, Dr. James Palmore, Mrs. Susan Palmore, Dr. Robert Retherford, and Ms. Sandra Ward. □

enumerations . . .

- About thirty officers from various States and Union Territories in India attended a workshop on various aspects of civil registration work held in New Delhi April 23–27. The workshop aimed to acquaint state-level officers with vital registration procedures, maintenance of registers, quality of data, and creation of incentives to encourage registration.

- A Regional Consultation for Asia and the Far East on the Integration of Women in Development with Special Reference to Population Factors was held at Sala Santitham, Bangkok, May 13–17. The conference was arranged jointly by the UN Center for Social Development and Humanitarian Affairs and ECAFE. Representatives from countries of the region exchanged views and information concerning the plans, policies and programs related to the integration of women in development and the progress made in this area. Mrs. Anuri Wanglee, Population Survey Division, National Statistical Office, Thailand, served as one of the UN resource persons for this meeting; her statement on the conference appears on page 9.

- A seminar on "Demographic Studies in Rural Areas of Bangladesh" was held June 23–25 at the Institute of Statistical Research and Training in Dacca. Senior officials of the Census Commission presented papers at the seminar.

- Plans for intercensal activities in Pakistan are under way, with emphasis being placed on the training of statistical staff in demographic techniques and census methodology. Syed Azad Ali and S. Sajjad Hussain, Statistical Officers of the Census Organization, are in Washington, D.C. currently undergoing training at the U.S. Bureau of the Census. A domestic in-service training program is also scheduled for this year. Dr. Charles E. Nobbe, whose services have been secured with the assistance of the Ford Foundation, will arrive in September to act as advisor in demography. Nobbe will be concerned with arranging and conducting in-service training programs in the techniques of analysis of demographic data.

- With a view to obtaining dependable measures of current vital statistics so as to meet the social, economic, and developmental needs of a newly independent country, Bangladesh conducted a single-round survey, the Retrospective Survey of Fertility and Mortality, in April, 1974 in conjunction with the postenumeration survey of the Population Census. Based on methodology developed by Professor William Brass, surveys of this type have been conducted in many countries of the world, particularly in Africa.

  The whole of Bangladesh, divided into enumeration blocks for the purpose of Population Census, constituted the frame of the sample. Sixty-two administrative subdivisions and four cities, which were Census Districts, were treated as strata. A single-stage systematic sample of enumeration blocks from each stratum was adopted, and a sampling fraction of one in two hundred, or 0.5 percent, was used. All the households in the selected sample blocks were enumerated, covering a total of about 64,000 households.

  The survey is being undertaken with the active cooperation of and financial assistance from the Overseas Development Administration of the British Government. The report will be available in 1975.

- A delegation from Pakistan will attend the Third World Population Conference in Bucharest, Romania, August 19–30, 1974. The Census Organization will be represented by Mr. Ghulam Mujtaba Mirza, Joint Census Commissioner.

- A Regional Consultation preparatory to the World Population Conference was held at Sala Santitham, Bangkok, May 7–10 under the auspices of the Economic Commission for Asia and the Far East. Among items considered was the draft World Population Plan of Action. Since the region has had experience in the field of family planning for more than two decades, and since nearly 98 percent of the region's people live in countries where family planning advice and services exist in an organized fashion, those at the meeting felt that the region's experience should be appropriately reflected in the Plan of Action. Therefore, the conferees concluded that the proposals made during the Regional Consultation should be commended to the World Population Conference for inclusion in the World Population Plan of Action, and that proposals not approved should remain as an Asian variant.

- Joint Census Commissioner of Bangladesh Mr. Safiullah Majumder and Deputy Census Commissioner Mr. Abdul Majid Mia are currently in the United States for training under a program of the U.S. Agency for International Development.

- Dr. Fred Arnold and his wife, Marcie Francis, finally arrived in Bangkok on June 6, where Dr. Arnold began his assignment at the National Statistical Office under an East-West Population Institute project of institutional cooperation. While in Thailand, Dr. Arnold will help in training the Population Survey Division staff and will be involved in the evaluation of the 1970 Population and Housing Census data as well as analysis of census data on fertility, migration, family composition, economic activity, and educational characteristics. He will also assist in the Survey of Population Change to obtain estimates of vital rates and the population growth rate in Thailand.

  While arrangements were being made to process Dr. Arnold's assignment to Thailand, NSO sent a cable to EWPI requesting Dr. Arnold to come as an advisor to the Thai Government. In transmission, however, "advisor" somehow became "afquknato." Dr. Arnold admitted later that while he was not quite sure what his work as "afquknato" would involve, it sounded interesting and he immediately accepted! In any case, welcome to Thailand, Dr. Arnold and Ms. Francis.

- Mohammad Hafiz Sheikh, formerly Joint Census Commissioner in the Census Organization of Pakistan, has been deputed as Demographer/Statistician to the Government of Zambia under the United Nations Technical Assistance Service.

- Two members of the Population Survey Division, National Statistical Office, Thailand, will be spending one year at the East-West Population Institute as interns, beginning mid-August. Mr. Jain Nirootinanont and Mr. Neramit Thanasakdi, both of the Labor Force Unit of the division, will be taking courses in Demography and Labor Force Statistics. Their programs of study and research have been arranged by the EWPI as part of their program of institutional cooperation.

PLANS FOR UPCOMING CENSUSES: JAPAN AND AUSTRALIA

News from Todatoshi Sakai in Tokyo and Tony Hart in Canberra tells of plans for future censuses. Japan's next census will be held in 1975 whereas Australia is preparing for a 1976 headcount. Both countries are conducting precensus tests and trying out new items for their questionnaires.

Census Pretests

The 1975 Population Census of Japan is to be conducted as of October 1, 1975. Studies on the scheme of the 1975 census started at Japan's Bureau of Statistics shortly after 1970, when the last census was taken. The Working Committee for the 1975 Census was organized in the Bureau at the beginning of this year to take the responsibility for formulating the program of the census. This committee will carry out three pilot surveys this year—in May, September, and December—to build up the scheme of the census.

The first pilot survey was taken in Nagoya City (Aichi Prefecture) and Takasaki and Maebashi (Gumma Prefecture) to evaluate the adequacy of enumeration items, layout and entry method of the census questionnaire, and so forth. The second pilot survey is scheduled to be held in 20 prefectures to reexamine various problems found in the first survey and to familiarize local statistical personnel with field survey procedure for the 1975 Census. The final pilot survey will sample four large cities to finalize the scheme of the 1975 Census and to study various problems in census-taking in large cities.

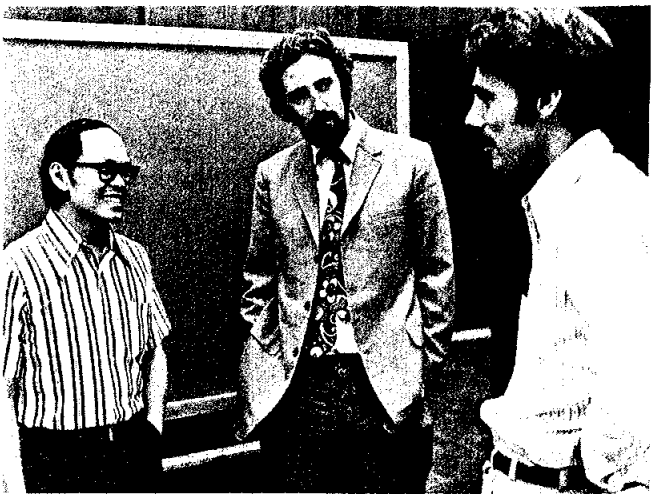
Tony Hart took time from preparations for the Australian field test to send this description of the July 1974 test:

The first test census leading up to the planned 1976 census is being held in Sydney and a rural center 200 miles west of Sydney, where 8,500 dwellings will receive one of three different basic census questionnaires being tested. In addition 1,000 of these dwellings will be visited by interviewers and a matching of interview results and questionnaire answers will enable measurement of the quality of response to the alternative questionnaires. The three questionnaires being tested are a booklet (similar to that used in 1971), a large sheet for 8 persons, and a computer-readable schedule. Half of each of these three will contain an income question, and we hope to ascertain the effect on response of the inclusion of an income inquiry. Three collection systems will also be tested: the standard Australian procedure, a procedure where respondents hand the completed schedule to the collector sealed in an envelope, and an anonymous system in which respondents provide only their first names.

The results of the field test will be published; preliminary results should be available for the next newsletter.

Schedule Content and Development

According to Sakai, the Japanese Inter-Governmental Liaison Committee was set up to consult with the interested ministries and agencies about the enumeration items to be included in the census questionnaire and the extent of tabulation of the census returns. In the 1970 Population Census, the "household schedules" adopted were designed to report up to six persons on one sheet. After the collection and examination of questionnaires, the enumerator was requested to transcribe the entries on the questionnaires onto mark-sheets, which were to be fed into the Optical Mark Readers installed in the Bureau. Most of the transcription was done by entering simple straight bar marks on the cards.



Exchanging ideas at the East-West Center are (left to right) *Joseph Lee of Hong Kong, Tony Hart of Australia, and Bob Retherford of the East-West Population Institute.*

For the 1975 Population Census, the Japanese Bureau of Statistics is making a study of a new data processing procedure consisting of 1) a combination of questionnaires and mark sheets that will make it possible to feed the questionnaires directly into the optical mark reader without transcription by enumerators; 2) entry of marks by household; and 3) entry of marks other than straight lines.

The Australian Bureau of Statistics is testing new schedule items, including questions about source of water supply, use of various types of fuel and power, source of housing finance, place of residence one year ago, whether a person has taken a holiday in the last year, language, attendance at pre-school and day care facilities, serious long-term illnesses and physical and mental conditions, life assurance, hospital and medical benefit cover, receipt of social welfare benefits, income, possession of a driver's license, and mode of travel to work. Significant amendments are proposed to the marital status questions to provide more clearly for de facto unions. Other questions being amended include those pertaining to class of dwelling and the labor force. □

PROGRESS ON CENSUS VOLUME

Research and editing are continuing on a volume about the 1970–71 round of censuses in Asia and the Pacific to be published as an occasional publication of the East-West Population Institute. According to Ms. Milann Gannaway, research assistant to Dr. Lee-Jay Cho, revised copy will soon be completed and returned to authors for final updating and approval. Contributors will be asked to add recent information from their countries, especially new publications, before the volume is published.

Ms. Gannaway and Mr. David Johnson have been working for several months with outlines and data supplied by representatives from Asian and Pacific census agencies. They have been attempting to obtain missing information and make country reports complete and comparable.

Tentatively titled "Selected Censuses of Asia and the Pacific," the report will summarize each country's census-taking procedures and problems and will be a useful resource and introduction to the area's census activities. The volume will include sample enumeration schedules and lists of tabulations made from all countries.

technical note . . .

NEW APPROACHES TO LABOR FORCE MEASUREMENT: USES FOR CENSUS DATA

by Teresa A. Sullivan

Early census data concerning the working population recorded occupation and later, industry. Four years of small-scale survey results preceded the adoption of the labor force approach, which first appeared in the United States Census of 1940. It is the labor force approach that is in widespread use throughout the world.

Two new approaches to measuring the working population have been proposed by CAMS, the Council for Asian Manpower Studies, and by ODA, the Organization of Demographic Associates. These two approaches, the "labor utilization approach" and the "CAMS–ODA approach," were designed with two thoughts in mind: a measurement of the work force that would reflect the complexities of developing economies, and a measurement of the work force that would be more useful for policy makers. Experimental applications of these approaches have been undertaken in several Asian countries with the hope of including the new approaches in the 1980 round of censuses.

THE LABOR UTILIZATION APPROACH

The first series of experiments retabulated existing census or survey data using the labor utilization approach. The labor utilization approach requires, in addition to the standard labor force data, information about hours worked, income, and the level of educational attainment. It is necessary that the data be in individual and household files, and not merely in summary form. It is useful, but not necessary, to have data on job-seeking activity or on the desire for more work by part-time workers.

Both the labor utilization approach and the labor force approach use the same population base—the population of working age—but the classification categories differ. Both approaches divide the base population into those in the labor force (the economically active population) and those not in the labor force. In the labor force approach, the economically active population is then divided into the employed and the unemployed. The unemployed are the residual category, for those who did any work at all are classified with the "employed." The labor utilization approach divides the labor force into those adequately utilized and those inadequately utilized. The implicit priority system also differs. The residual category is the adequately utilized persons. Four forms of inadequate utilization take successive priority over adequate utilization. These four forms are: unemployment (defined in the same way as in the labor force approach: actively seeking work during the reference period); the inadequately utilized by hours of work; the inadequately utilized by level of income; and the inadequately utilized by mismatch of occupation and education.

The four forms of inadequate utilization are sorted in the order given. That is, first the unemployed are tabulated. Those persons who are actively seeking work and who presently have no work at all are probably the first group of interest to policy makers. Then, the underutilized by hours of work are tabulated. These are the involuntary part-time workers. It is presumed that providing full work weeks for the working population is the second policy priority for the government. The cutoff point for the hours of work comprising a full work week should be set a priori. Several kinds of cutoff points have been used. A full work week for government employees has been used as a standard. In some experiments, different work weeks have been set for urban and for rural residents, or for farm and nonfarm industries. It may be that persons working a full work week may be looking for even more hours of work. We do not recommend including these persons in the category "underutilized by hours of work," simply because they do not pose the problem to policy planning that the involuntary part-time workers pose.

In the third category are the workers with full work weeks but with inadequate incomes; these are the "underutilized by level of income," or the "working poor." This is the third sorting procedure, because it was believed that after governments have ensured sufficient hours of work to their workers, then the income of the workers will become an important policy problem. The underutilized by level of income may represent workers of substandard productivity or workers in industries of substandard productivity. They pose a problem for general welfare reasons, or for more narrow macroeconomic reasons (e.g., level of aggregate demand).

The income cutoff level should be set a priori; an official government poverty line would be one possible cutoff point. If an independently collected income distribution is available, the lowest 5 or 10 percent of the income distribution might be set as the cutoff point. In general, we suggest that the cutoff point be a reasonable target figure for short-run economic development.

The final category is the inadequately utilized by the mismatch of education and occupation. Of primary concern here are those who are highly skilled but for whom no suitable jobs are available. From the nation's point of view, their skills are being wasted. If this group is large, it may be a source of political instability. In some countries, a different sort of mismatch may be a problem: the filling of positions by persons who are not qualified for them. This kind of "overutilization" has not been measured in any of the experimental work to date. Mismatch may be voluntary, as in the case of college graduates who prefer to undertake manual labor for a few years or who would prefer to drive a taxi. We suggest including even voluntary mismatch in the mismatch category, because of the net social cost it represents. Mismatch is the final category in the sorting because it is believed that this is the lowest priority for government action.

The cutoff points for mismatch require an ordinal-level scale, either for education or for occupation. We recommend at least a two-digit code for occupation. The mean educational level for each occupation may be established, or the mean occupational level for each increment of education may be established and used for the cutoff point. A better procedure would be to calculate standard scores, and to use as the cutoff point one standard score above the mean.

It is possible to tabulate those who are underutilized in more than one way if a per-hour income is established. Otherwise, it goes without saying that those who are working short work weeks are likely to earn a low income. Many persons who are mismatched receive inadequate incomes, and they are included in the low income category because

of the successive sorting scheme. The mismatched may also work short work weeks and be counted among the underutilized by hours of work. Even if multiple sources of underemployment are not tabulated, the voluntary part-time workers should be tabulated for mismatch.

The labor utilization approach uses the same time referent as the labor force approach, except that annual or monthly income may be asked rather than weekly income. This is particularly true in rural areas. The same definitions of "unemployed," "unpaid family worker," and "not in the labor force," are used in both approaches.

Household Tabulations

One striking difference between the labor utilization approach and the labor force approach is that the former presents two series of tabulations. The series for individuals is similar to the labor force approach. But the labor utilization approach also presents a series of household tabulations, in which the household is considered to be an economic group which is more or less contiguous with the family. (It is recommended that each country adopt the term *household* in accordance with the procedures currently followed for identifying households.) Household tabulations are presented for a variety of reasons:

1. The prevalence of household enterprise in developing countries;
2. the use of the household as the employer of last resort; and
3. the role of the household in economic decision making.

For tabulation purposes, the household is considered to be an aggregation of its labor force members. Both the labor force and labor utilization approaches have the same number of individuals included in the individual tabulations, but the household tabulations recognize the existence of a significant economic grouping among those individuals. (A different conception of the household is used in the CAMS–ODA approach.)

Problems in the Approach

Because the base population is the same in both the labor force and labor utilization approaches, comparability of time series is relatively easy to assure. The labor utilization categories are easily collapsed into the "employed" and "unemployed" categories used in the labor force approach.

LABOR UTILIZATION APPROACH

Labor Force (100%)
- Adequately utilized
- Inadequately utilized
  - Unemployed
  - Inadequately utilized by hours of work
  - Inadequately utilized by level of income
  - Mismatch

LABOR FORCE APPROACH

Labor Force (100%)
- Employed (= Adequately utilized + inadequately utilized by hours of work + inadequately utilized by level of income + mismatch)
- Unemployed (= unemployed)

More serious problems are the collection of the data, especially the income data, and the international comparability of the labor utilization data, given different cutoff points in each country.

Neither absolute accuracy nor a complete income distribution is required for the labor utilization approach. It is necessary only to identify those persons at the very bottom of the income distribution. Where monetary income is difficult to assess, the poorest persons may be identified by the use of income proxies. Production proxies assign a market value to the farm products or other commodities the family has produced. Consumption proxies are based on a scaling of consumer goods and may confound current income with wealth, but this is believed to be a less serious problem at the bottom of the income distribution. It should also be noted that the most discriminating consumer items for separating the lowest decile of the income distribution are likely to be mosquito nets, radios, bicycles, and other fairly inexpensive items—certainly not automobiles, refrigerators, or television sets. Water sources, roofing materials, and other housing characteristics may provide an appropriate consumption scale.

Because of the heterogeneity of working conditions, labor statistics are not so readily comparable as vital statistics. Working age, the standard work week, and occupational groupings already vary from country to country. The addition of national cutoffs for income and mismatch may seem unnecessary complications. However, particularly at this ex-

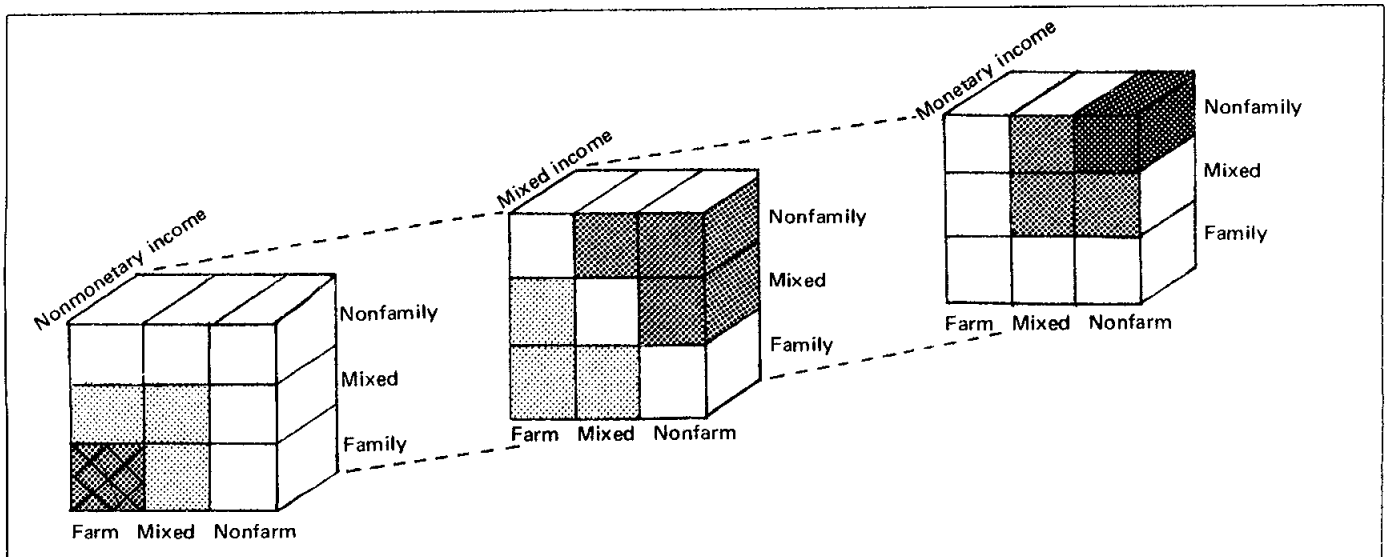


Figure 1 The 27 cells of the CAMS-ODA classification. (Adapted from Wilhelm Flieger.)

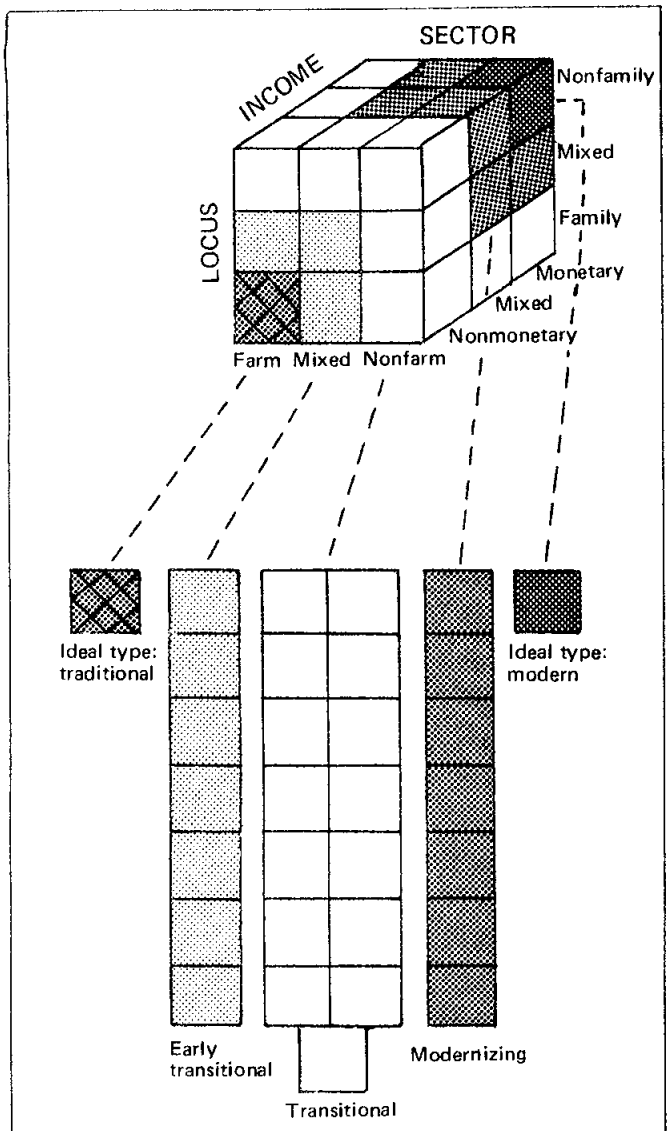


Figure 2 The economic stage categories developed from the 27-cell CAMS-ODA classification. (Adapted from Wilhelm Flieger.)

perimental stage, the immediate goal is better data for national policy analysts. Knowing the relative incidence of kinds of underutilization may be useful in allocating the marginal development dollar. For example, where mismatch is high, overinvestment at a given level of education may be a problem. In the long run, there may be greater consensus even about the relative cutoff points. If those underutilized by level of income were, let us say, that proportion of those in the lowest 5 percent of the income distribution who are already working forty hours a week, international comparisons of those proportions would still be useful.

THE CAMS–ODA APPROACH

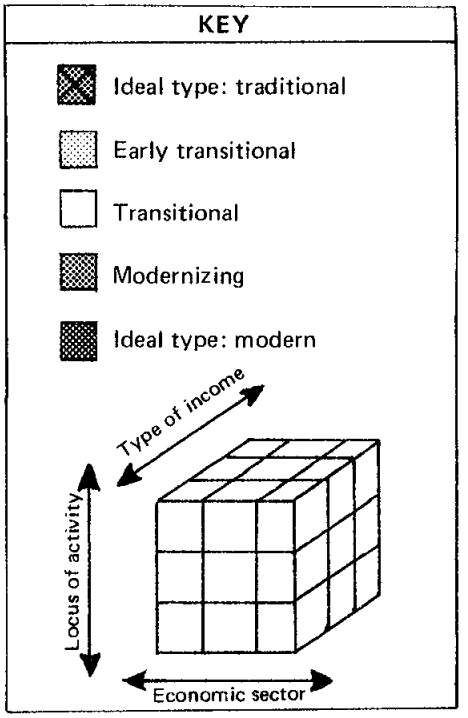
The CAMS–ODA approach differs from the labor force approach in three basic ways:

1. It disaggregates the economy along three dimensions;
2. It allows the tabulation of multiple job-holding and of multiple status;
3. It may be taken as a functional classification of the entire population of working age, and not merely of the labor force.

Household tabulations are also presented in the CAMS–ODA approach.

The three dimensions of the CAMS–ODA approach are economic sector, locus of activity, and type of income *(see KEY)*. Because multiple job-holding is tabulated, persons may participate in more than one economic sector, or receive more than one type of income. For this reason, each dimension is sub-classified by a trichotomy. Economic sector is classified as agricultural, mixed, or nonagricultural. Locus of activity may be family enterprise, mixed enterprise, or nonfamily enterprise. Income may be nonmonetary, mixed, or monetary. When cross-classified, these dimensions yield the 27 cells depicted in Figure 1.

Implicit in these dimensions is an underlying premise that the traditional economy, characterized by the subsistence family farm, is transformed during the process of development into a modern economy, characterized by nonfamily, nonagricultural employment and cash incomes. Twenty-seven cells are difficult to manipulate, and many may be empty cells, so five "economic stages" have been developed from the 27 cells. Figure 2 shows these stages. Categorizing individual workers by these stages gives a picture of the economic distribution of the work force. Occupation and industry classifications give a similar picture, but in developing countries, an industry such as transportation may consist of widely diverse elements. The economic stage variable helps to unscramble those elements.



The locus of activity dimension may be difficult to apply in some areas. We are suggesting that all work performed within the household or on the family farm and all work done for a relative be considered "family enterprise." More precise definitions of the geographical limits of a household and of the degree of kinship of employers remain to be established. One point should be made about the type of income dimension. The income may accrue either to the individual or to the household; unpaid family workers, for example, receive no direct income, but the income resulting from their work accrues to the household.

The "mixed" categories allow the reporting of jobs from different parts of a dimension. This is one way of recording multiple status, although it also indicates a transitional eco-

nomic position. In addition, the number of jobs within a given cell would be recorded, for example, two or more family enterprise farm jobs with nonmonetary income. Job-seeking activities are reported for all workers, including those who are working full time.

The CAMS–ODA approach may be a classification of those in the labor force; this is called the conservative usage of the approach. In a more radical application of the approach, all adults regardless of labor force status are classified. The more radical approach requires some adjustments in the cross-classifications. For example, in the "type of income" dimension, the category "no income" must be added for housewives, some students, and many of the retired and disabled. The radical usage, because it aims at a complete functional classification, also asks of every respondent, "Did this person also do housework? Was this person also a student?" Consequently, multiple jobs, job-seeking activities, and non-labor force activities all must be recorded.

Household Tabulations

Household tabulations for the CAMS–ODA approach are based upon a conception of the household as an abstract entity possessing its own characteristics. Among its salient characteristics are its size, type, and income. Type is based upon the number of nuclear units and the number of generations in the household. Household income is the sum of all income accruing directly to the household, or indirectly to the household members.

It is assumed that all households must have some sort of income to survive. The classification of households into dimensions is based upon the household income. If all household income is from farming, the household is in the farm sector. If some income is from sources other than farming, the household is in the mixed sector. In this fashion, all households may be located within the twenty-seven cell scheme.

The CAMS–ODA approach will be used in two forthcoming national sample surveys. Until those data are ready, only speculation about the usefulness of the approach is possible. Documentation on this approach is skimpy.[1] The analysis of multiple job activities would be useful to most governments. The three dimensional scheme would be useful, particularly in time series, for developing countries.

CONCLUDING OBSERVATIONS

This brief overview of the two approaches does not adequately discuss their operational and analytic difficulties. Nor does it demonstrate their usefulness to policy planners and social scientists in any conclusive manner. The participating researchers are aware of the vulnerability of the work, especially in its experimental stages.

But to return to the purposes for which the approaches were designed, it does appear that they may improve the scope and quality of labor statistics. First, they reflect some intricacies of developing economies. The labor utilization approach adds income and education as considerations in underemployment. When cross-classified by demographic variables, this approach indicates patterns in the composition and incidence of underutilization. The CAMS–ODA approach incorporates multiple statuses and a developmental classification. Such data may facilitate more penetrating studies of the influence of migration, fertility, and socioeconomic attainment on labor markets.

Secondly, the approaches provide better data for policy makers. The labor utilization approach indicates in which way marginal development expenditures might best reduce underutilization, either by eliminating a source of underemployment, or by aiming remedial programs at the most affected regions or groups. The CAMS–ODA approach provides a longer-run perspective on the transition of the labor force. Judgment on the two approaches awaits further experiment.

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Teresa Sullivan recently completed her Ph.D. in Sociology at the University of Chicago and is now teaching at the University of Texas. She presented an earlier version of the above paper at the Third Population Census Tabulation Workshop-Conference in Honolulu, March 25–30, 1974. Copies of the Appendix materials, including model questionnaires for both approaches, may be obtained free of charge by writing to the Editor, Asian and Pacific Census Newsletter, East-West Population Institute, Honolulu, Hawaii 96822.

1 The first detailed discussion of the CAMS–ODA approach, including tabulation schemes and model questionnaires, will be found in the forthcoming CAMS manual written by Dr. Wilhelm Flieger and Teresa Sullivan.

COMMENT ON A CONFERENCE

by Anuri Wanglee

The Regional Conference on the Integration of Women in Development with Special Reference to Population Factors in the ECAFE Region (May 13–17, 1974) was organized to provide an opportunity for countries of the region to exchange views and information concerning the plans, policies, and programs that are related to the integration of women in development and the progress made in that direction; to explore possible areas for further research (including collection and analysis of information); and, most importantly, to set guidelines, priorities, and targets for action in the region.

The Status of Women and Economic Development

In reviewing the status of women, their integration in the developmental process, and population factors in the region, several participants mentioned that in the past emphasis has been given to economic development. Only recently has there been gradual recognition of the interrelationships of demographic and socioeconomic factors in development. It is now realized that promoting the development and well-being of a nation and its people requires concerted effort in all socioeconomic aspects of policy, including population, and that socioeconomic development will, in turn, affect population growth. As a result, social aspects of development have only recently been integrated into developmental plans and policies.

Although notable progress in the advancement of women and their integration in development has been achieved in many ECAFE countries, some participants warned that we should not be lulled into a false sense of complacency, since much of the progress achieved has been on the part of the well-educated elite. Greater efforts should now be focused on improving the status of the vast majority of women: those who are the least privileged, those in the rural areas, the uneducated and those who have neither the capability nor the opportunity to participate fully in the developmental process.

One of the most important obstacles to the integration of women in development has been the lack of attention given by governments to this problem. They regard it as an isolated issue, concerning women only, and they completely overlook the important role of women as a factor profoundly affecting population trends and therefore the success of the entire development effort. In this context, several participants expressed the opinion that policy makers and developmental planners should be made to recognize the importance of women as an untapped potential human resource, and that a prerequisite for achieving development is the full utilization of all human resources including women's full participation in the developmental process. Women should be urged to take more active roles in politics and public life and have greater involvement in work related to overall development planning, particularly at the policy level. Participants also recommended the formation of national women's commissions and the creation of permanent women's bureaus within the existing bureaucratic organization. These groups could effect the integration of policy and programs relevant to the role of women in development within the framework of national development plans.

Implications of Population Growth

In most countries of the region, development is hindered by high rates of population growth; indeed the situation in the ECAFE region is one of the most critical in the world. The region is characterized by high rates of growth, unfavorable age structures (that is, high dependency ratios), and problems of population distribution such as rural-urban migration and urbanization. Many of the developing countries in the region already face serious problems of mass poverty, insufficient food supply, inadequate educational and health facilities, unemployment, and underemployment. These problems may become even more acute because of the population problem, and the present food and energy crises will almost certainly result in further setbacks to development. All of these factors have serious implications for achieving the full integration of women in national development. Where the population growth rate is high and there is severe competition for the use of resources, on the one hand to provide the basic necessities of life, and on the other to invest in increased agricultural and industrial output, women may find their access to education, training, and employment to be even more limited.

Anuri Wanglee of Bangkok's National Statistical Office meets with the delegation from Indonesia over coffee at the Census Conference in Honolulu. On her left is Abdulmadjid; Sam Suharto is at right. In the background is Mohammad Hafiz Sheikh of Pakistan.

Population Policies

Being well aware of the problems caused by accelerated rates of population growth, most of the governments of the region have formulated population policies to curb such growth. Those with family planning policies or family planning activities cover over 90 percent of the region's population. Economic betterment, the improvement of the health of mother and child, and social development are cited as major reasons for the adoption of family planning as a national policy in these countries. It should also be noted, however, that enabling women to make free and responsible fertility choices, through the provision of family planning information and services, is an important precondition to the improvement of the status of women, freeing them to become more actively involved in nonfamilial pursuits.

Family Planning Only Part of Total Program

Access to family planning must also be accompanied by other factors—for example, the existence of a variety of role options for the woman, access to educational and vocational training, and changes in the traditional cultural and religious attitudes and political constraints on their assumption of these alternative roles. Family planning should not

be considered as an alternative to—and should not be undertaken in isolation from—other social and economic development programs. Unless family planning is related to a total program of development, including reduction of mortality, the education of girls, promotion of the status of women, increase in age at marriage, employment opportunities for women outside the family, and more equitable distribution of the gains of development, a decline in the fertility rate is not likely to be achieved. There is a need to shift family planning services from the clinic to the community and to involve at all levels available social groups and organizations in the country. This is a field in which women could become even more actively involved and which provides an effective avenue for achieving their full integration in development. In many countries, women's voluntary groups and youth corps already participate in such activities.

Education and Employment for Women

If it seems that I have given the most emphasis to only one of the demographic factors effecting population change to the neglect of the other factors, namely, mortality and migration, it is because in this region fertility remains the most crucial element in determining the future course of the population of the region. The important role of education as a means of improving women's access to employment was noted, but at present in several countries of the region differentials, and in many cases large differentials, exist between males and females with regard to literacy, educational attainment, and school enrollment at various levels. Due to traditional values or limited economic capacity, girls were generally at a disadvantage.

Some conferees suggested that the limitation of study to female-oriented courses should be discouraged, so that access to wider opportunities for employment would be possible. Several participants emphasized that training for women should be geared to local needs, particularly for the large majority of rural women, but needs of urban women should not be overlooked. In the case of the rural women, training should be aimed at providing them with skills to obtain income-producing jobs in the area, which would encourage them to remain there rather than to migrate to the cities. The importance of providing adequate outlets for the crops or goods produced by these women was also stressed.

Participants urged integration of population education at all levels, including both formal and nonformal systems of education and adult education.

The need for positive legislation to guarantee the rights of women, particularly their rights in marriage, education, training, and employment, was noted, although it was recognized that legislation by itself is not enough; discrepancies still exist between laws and their actual implementation.

The Need to Change Traditional Attitudes

A recurrent theme throughout all the issues raised during the discussions was the need to change prevailing attitudes that inhibit women's full participation in the development process. Several participants felt that this situation was due partly to the adherence to the traditional male-dominant role in society and partly to the acquiescence of the female in accepting a more subservient role. There is a need to change the traditional image and definition of woman as wife and mother that is held by both males and females at all levels of life. This should be achieved through the mobilization of public opinion.

Last, but not least, participants expressed the need for more data and research in relation to the complex of factors affecting the condition of women, for instance, the relationship between fertility, education, and employment.

Each year about 80 million babies are added to the population of this region, almost half of whom are female. If we ever hope to improve their quality of life and provide them with better opportunities for their "full and productive participation in the development of society at all levels," it is time for the governments of this region to take serious action now. □

BANGLADESH

Provisional census results released

The Census of Bangladesh was taken from February 10 to March 1, 1974, with March 1 as the reference date. Provisional figures, published on June 8, reveal a population of 71.3 million. The sex ratio is 108 males per 100 females. Population density of Bangladesh is 1,283 persons per square mile (495 persons per square kilometer). According to current census figures, the population has increased by 20.5 million persons, or 40.27 percent, in 13 years.

These figures are based on a field tally; final totals will be released after data have been checked by the Data Processing Centre.

The above cartoon appeared during the closing days of the Bangladesh Census Field Enumeration in a national daily newspaper with a wide circulation. It emphasizes the theme that the census aims at 'counting' even those who otherwise may not 'count' so much. (Contributed by Bahauddin Ahmad.)

publications that count . . .

by Alice D. Harris

The 1970 and 1971 rounds of censuses taken in the Asian and Pacific countries have been generating a vast amount of new statistical information. These data are appearing continually in new publications from census bureaus, and many of these publications are received in the Resource Materials Collection at the East-West Population Institute. It will be my pleasant task to review some of these new publications for newsletter readers from time to time. Anyone knowing of new items that might be brought to the attention of others is requested to write to the editor, Ms. Betsy Gould, with details.

Indonesian Statistical Series

The first item of note is the 1971 Indonesian Census, which is currently being released in a series of volumes, each with several parts. The Indonesian government has made this census—the second one since independence was achieved—an integral part of its first five-year Statistical Development Plan for 1969—73. Although there are statistical data for Indonesia for a period of more than 150 years, they have proven to be spotty and unreliable, so that by the time the 1971 round was ready to be taken, officials could only guess that the population was about 122 million, and that it was growing at rates estimated from 2.5 to 3 percent. The entire design of the 1971 census was to permit a better understanding of population dynamics in this fast-growing country.

The census is divided into Series A through L, beginning with the number of blocks and households in each regency/municipality and working through a detailed set of more refined data that can be used for planning and development. Series A, number 7 contains the preliminary tables on population, broken down into three volumes: *Number of Population in each Province by Regency/Municipality; Population by Sub-District in Java-Madura by Age, Sex, Citizenship, and Urban-Rural Division;* and *Population by Sub-District outside Java.* Series C contains more detailed information on employment, education, and social conditions based on advance tables from a 10 percent sample processing from the sample census. Figures for metropolitan areas like Jakarta and Yogyakarta are based on the complete data. Other interesting series include Series H, which is an outline of the 1971 census results, particularly in comparison with the 1961 Population Census results; Series K, which projects Indonesian population by age, sex, and region from 1971 to 2000; and Series L, which contains data on migration, population density, and other characteristics. The census was taken September 6—24, 1971, employed a total of 160,120 enumerators, and utilized a combination of the de jure and de facto methods. For further information on the complete publication series of the Indonesian census (which is in English as well as Indonesian), write to the Biro Pusat Statistik, Jakarta, Indonesia.

Alice D. Harris is Resource Materials Specialist at the East-West Population Institute. She and her staff maintain the Resource Materials Collection, which consists of a documentation service and reference collection, a data bank with emphasis on the results of censuses and surveys in Asia and the Pacific, and in-depth documentation on special subjects. In addition to providing reference and research materials for Population Institute staff and students, Ms. Harris occasionally serves as advisor to documentation interns who are in the process of building population libraries in the Asian and Pacific region.

Publications from Thailand and Malaysia

Another prolific publisher of census figures is the National Statistical Office of Thailand. The 1970 Population and Housing Census was conducted in April 1970 (the official census date is April 1, 1970). Most of the volumes in the series have been issued for all four regions: central, northern, northeast, and southern. Each volume covers one *changwat,* or province, supplying information on the family and dwelling unit. Although this is Thailand's seventh census, it is the first time that information has been taken on housing. For municipal areas the data tabulated are complete; for nonmunicipal areas only a 25 percent sample has been used. A single volume covering the whole kingdom will be the evaluation and summary that completes the census. The changwat series are available from the National Statistical Office, Bangkok, for about 30 baht (US$1.50) each. A complete listing of census publications prior to 1970 can be obtained from the same office for 20 baht (US$1.00). Just request the *Statistical Bibliography,* which is in English. The census volumes are all in the Thai and English languages.

A recent publication from the Department of Statistics in Malaysia is the *Abridged Life Tables: Malaysia 1970* which may be purchased from the Census and Demography Division, Department of Statistics, Kuala Lumpur, for M$5.00 (approximately US$2.00). Included in it are life tables for Peninsular Malaysia and for Sabah and Sarawak as well. The data have been tabulated from the age distributions in the 1970 Census of Population and civil registration figures. There are two sets of figures for Peninsular Malaysia, one using a population base that has been adjusted for underenumeration as estimated from the post-enumeration survey, and the other using the unadjusted 1970 census figures. Life tables have been computed for the major ethnic groups in the country—Chinese, Malays, Indians, and Other. Although tables for Peninsular Malaysia were published after the 1957 census, this is the first time that they have been constructed for Sabah and Sarawak. Although their primary purpose is to measure the level of mortality in Malaysia, life tables can also be useful to those undertaking research on fertility, migration, longevity, and population growth, and they can aid in population forecasting. For the *Abridged Life Tables: Malaysia 1970,* or for other products of the 1970 Census of Population and Housing contact the Census and Demography Division, Department of Statistics, Kuala Lumpur, Malaysia.

News from Hong Kong and Sri Lanka

From Hong Kong comes word of a census monograph released in July 1974 on transport characteristics. It summarizes the travel patterns of the labor force and students as recorded in the 1971 Census. Titled *Hong Kong Population and Housing Census 1971: Transport Characteristics,* it is available from the Census and Statistics Department, International Building, Des Voeux Road, Central, Hong Kong.

Sri Lanka's Department of Census and Statistics has just released its *Preliminary Report on the Census of Population,* which was taken on October 9, 1971. The results, based on a 10 percent sample tabulation of the census schedules, provide detailed cross-classifications of various population characteristics of Sri Lanka as a whole as well as for the urban and rural regions. Data from the complete census will be made available at a later date, but the preliminary figures are expected to provide needed information for planning and research.

Pacific Items

Turning from Asia to the Pacific, I would like to briefly mention two publications. Tony Hart, newsletter correspondent from Australia, writes that most of the 1971 census publications have now been completed. Latest to appear was a timely report on population characteristics by electoral divisions, which appeared during the first week of Australia's recent heated election campaign.

The first public release of population statistics from the 1973 Census of the Trust Territory came in February 1974 after two years of hard work. This effort was the largest census-taking program of this kind for the region. In addition to regular staff, 400 district and field enumerators had to be trained and sent out by ships to more than 100 islands. The completed schedules were then sent to Saipan for coding into computer-readable form. After the data were punched onto cards, East-West Population Institute staff wrote and ran computer editing programs to correct enumeration and coding errors. The rate of error in the total data set of 138,000 cards was less than one percent. Not a bad record for a first major census! The results showed that the annual population increase since the Peace Corps census of 1967 was 3.5 percent. The most significant feature revealed was the extreme mobility of the population during this period. To receive a copy of the census results, write to the Public Information Division, Trust Territory of the Pacific, Saipan.

Sources of General Interest

Before concluding, I want to note two other items of general interest. For readers with a specific interest in migration data, a *Checklist of Current Government Serial Publications Containing Vital or Migration Statistics* was published in the October 1973 issue of *Population Index.* It is an up-dated version of a list that appeared in the 1968 issue; changes have been made by examining new official documents or through correspondence with the agencies responsible for collecting the statistics. The *Checklist* is a good primary source for anyone interested in doing migration research on a country. However, it reveals that this kind of statistical data collection is still inadequate despite the attempts of the United Nations to persuade countries to make their migration data more accessible and more comparable internationally. Other sections in the quarterly issues of *Population Index* that contain important listings of new census publications are: Life Tables, International Migration, Organization and Administration, New Periodicals, Official Statistical Publications, and Trends in Population Size. *Population Index* is edited by Barbara Glouchevitch and is available from the Office of Population Research, Princeton University, Princeton, New Jersey 08540. The annual subscription rate is US$15.

William Seltzer has written a monograph on *Demographic Data Collection* that should be in everyone's library. It is a concise, lucid explanation of the methodology used in taking censuses and surveys. The book helps to clarify many of the problems encountered along the way. Originally issued as an *Occasional Paper* of The Population Council, New York, *Demographic Data Collection* is being made available as a part of World Population Year 1974 upon request to the World Fertility Survey, International Statistical Institute, Prinses Beatrixlaan 428, Voorburg, The Netherlands. □

CENSUS INTERNS AT EWPI

Three census interns returned home recently after spending about six weeks at the East-West Population Institute, where they worked with EWPI staff members and attended lectures and discussions during the Institute's Fifth Summer Seminar in Population. They were Mrs. Emma Franco, National Census and Statistical Office, Manila, Philippines; Mr. Siu-Ming Tam, Census and Statistics Department, Hong Kong; and Mr. Yuwono, Central Bureau of Statistics, Jakarta, Indonesia.

Mrs. Franco consulted with Drs. Lee-Jay Cho and Robert Retherford about a computer package design and tabulation plan that would enable the Philippine government to make own-children estimates of fertility. Mr. Tam was also interested in learning more about the own-children technique, and he investigated the possibility of doing similar estimates using Hong Kong's census data. Tam also explored ways of improving census questions related to own-children data.

Both Mrs. Franco and Mr. Tam participated in Dr. James Palmore's workshop on demographic surveys; Mr. Yuwono was in the sociology workshop coordinated by Dr. Cho and Dr. Monica Fong. All three interns attended technical sessions at the seminar, which included a series of lectures on special topics in demographic measurement given by Dr. Norman B. Ryder, Senior Fellow at the Institute. Guest faculty members at the Summer Seminar were Professor William Brass of the Department of Medical Statistics and Epidemiology at the London School of Hygiene and Tropical Medicine and Professor Henry S. Shryock, Jr., of the Center for Population Research at Georgetown University in Washington, D.C. Brass, who has developed techniques for estimating mortality and fertility from census data, offered a course in demographic estimation techniques. Shryock lectured on migration statistics. Sixty-five Asian, Pacific, and American social science faculty members participated in the month-long seminar.

THE ASIAN AND PACIFIC CENSUS NEWSLETTER is a quarterly publication of the East-West Population Institute, supported by a grant to the Institute from the Agency for International Development. It is available without charge to governmental agencies, private institutions, and interested individuals. News items and comments are welcomed and should be addressed to: Census Newsletter Editor, East-West Population Institute, 1777 East-West Road, Honolulu, Hawaii 96822.

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