A NEED FOR AN INTEGRATED STATISTICAL SYSTEM FOR MANPOWER PLANNING IN SOUTHEAST ASIA

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Introduction:

With a shift in development strategy, from industrialization to modernizing agriculture, from urban to rural, from accelerated growth to improved income distribution, full employment, and social development, we are beginning to feel the urgent need to restructure statistical systems which can generate data and information for dealing with the issues emerging from the new policies and planning.

Over the past decades, those of us specializing in the field of national accounting have felt the inappropriateness of data systems which have been directly transplanted from the West, (especially with the help of experts from the Census Bureau in the U.S.) We should note that the Western statistical system was an outgrowth of problems, needs, and conditions confronting developed countries of the West, especially the United States. And these differ sharply from those confronting Asian countries. In the West, the major problem faced during the past half-century was business cycles, particularly the problem of depressions, which raised issues requiring data on unemployment rates, inventory changes, consumer plans, investment intentions, etc. Business cycles are a relatively minor problem if compared to the problems of growth and distribution in Asian countries. In contrast, the problem of unbalanced growth, (i.e., the slow growth of small farms, small industries and small commerce), is of little importance for the developed economies. With extensive affluence, social development is less urgent for the developed than the underdeveloped countries where illiteracy, illhealth, ill-housing, income disparities and poverty are pervasive.

Finally, there are few similarities in the structure of developed and underdeveloped economies: in the latter there are "..... widespread prevalence of small units of production ..... the lack of specialization

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and the variety of activities undertaken by these units, the absence of accounting records and even uniform units of measurement, the variation in quality, size, and design of a particular commodity whose production is not subjected to the standardization imposed by the machine process and scientific agriculture, the importance of subsistence production, etc.“\(^1\)

This paper is an attempt to explore various ways in which Asian statistical systems can be changed to be more useful for developmental purposes: research, planning, policies, administration. While the focus is on manpower and human resource data, we shall find that such data must be generated within the context of a wider body of information if they are to be of maximum value, since planning must be an integral part of an over-all socio-economic plan.

**Manpower Statistics\(^2\)**

The major source of comprehensive manpower statistics is the census (decennially in South and Southeast Asia and quinquennially in East Asia) and the labor force surveys. There is widespread dissatisfaction with the statistics from these surveys, especially for manpower and economic planning. Various attempts have been made and several proposals have been advanced to overcome their limitations. But none seems to be adequate for the purposes of planning. The reason may be that these suggested solutions do not come to grips with the basic limitation of labor force statistics for manpower, social and economic planning.

The most detailed and specific criticism of the labor force concepts are found in the May 1971 Conference on Manpower Problems of Council for Asian Manpower Studies, especially the various country papers on labor absorption.\(^3\) As these papers make clear, the current surveys and censuses give a picture of those who are in or out of the labor force, with or without employment only for one week, usually the week before the survey or census. In the developed countries, employment is usually

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2) This section is an abbreviated version of a paper entitled "Differences in Labor Utilization Concepts in Asian Censuses and Surveys, and Suggested Improvements," (mimeo), Sept. 1973, Council for Asian Manpower Studies, Manila.

3) A summary of these papers is given in the *Malayan Economic Review*, October 1971. The revised versions will soon be published in a special issue of the *Philippine Economic Journal*. 

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not just for a week but for a month, quarter, half-year, or a year, etc. This is not likely to be the case in the developing countries where production is generally carried out in small units (farms, shops, stores, homes, etc.), and where seasonality is extensive. Employment for a large portion of the labor force is by the day or week, is usually intermittent, unstable, irregular, and seasonal. Thus, if the census of population (or a labor force survey) shows that the unemployment rate is only 5%, this will pertain only to the situation during one week of a year. We do not know whether the unemployed persons have been jobless during the week before the reference week or any or all the previous 50 weeks. Or that a person reported to be employed during the reference week was employed in the weeks prior to the reference week. With pronounced seasonality, more than one-third of the farmers may be unemployed if the reference week of the census or survey was during the dry season as was the case for Thailand in the 1970 Census. Or conversely, if the reference week coincided with the peak seasons of planting (June) or harvesting, unemployment among the farmers may be nil. Similarly, the small workshops produce on the basis of small, in-coming orders which may be sufficient for one or few days of work during the week. Moreover, whether a person is in the labor force or out of it depends on the reference week. If the week (as in the Philippines) is in early May, schools may have not begun, and the size of the labor force and unemployment may be high due to youngsters looking for jobs but if the week is in late May when schools have started and the youngsters are back in school, the labor force and unemployment will be smaller, as was actually the case in the Philippine survey for May 1973 as compared to May 1972 (see the statement of the Bureau of the Census and Statistics of the Philippines on the May 1973 survey).

There are many other problems — e.g., multi-occupations, changing jobs, unpaid family helpers doing intermittent work, housewives, students, and elder persons doing part-time work. For the manpower planner, the detailed census volumes on the labor force for provinces and cities are of limited usefulness if the data on the unemployed, under-employed and part-timers pertain only to a single week of a year. How can the manpower experts identify the localities where labor surplus exists, and the seasons of the year when shortages prevail? And if the data on the employed refers only to one week, how can the manpower planners be sure what skills are in short supply or which are surplus when job changes are so frequent? And yet the planners must be sure of these situations before projects to absorb labor surplus and programs to train skills are to be established.

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Indeed, how is the socio-economic planner going to determine whether the development strategy should be labor-intensive or capital-intensive, or to determine what the precise mix of labor-and capital-intensive projects for different regions of the country should be, if, as in the Thai situation, the labor force surveys show very low rates of unemployment 1 or 2% while the 1970 population census shows rates of unemployment as high as 40% of the labor force (because the census was taken in the driest month of the year, so that the farmers were waiting for the rains to come)?

Accordingly, the priority problem for both manpower and general planning is to get a good picture of the amount and kind of manpower available throughout the year and in different parts of the country. Snapshots of one, two, three, or even four weeks will not do; we need reels of motion pictures showing men and women at work, in the home and in the streets; we need to know their occupations, skills and education, their industries and locality, their health, housing, incomes, expenditures, and savings (or borrowings).

Finally, the increasing demands for social planning require a regular flow of information on the education, nutrition, health, housing, migration, income and expenditure distribution, etc., of the working-age population, both the economically active and in-active population. Tables cross-classifying manpower information with social characteristics are essential for human resources and social planning. It is no wonder that countries like Japan spend more money in the collection of social and household statistics than on business establishment statistics, conducting monthly labor force surveys, family income and expenditure surveys, farm family surveys, periodic employment status surveys, quinquennial censuses, opinion surveys, health surveys, etc.

In order to overcome some of these difficulties, the Bureau of the Census and Statistics (BCS) of the Philippines in 1958 and in 1966 undertook a household sample survey in which all working-age persons (10 years and above) were asked how many weeks they worked during the past 12 months. Thus, these surveys were among the first to go beyond the conventional labor force concepts and procedures, recognizing the various difficulties noted above. Unfortunately, very little notice was taken of these efforts—until the arrival of Dr. Mitsuo Ono from the U.S. Census Bureau (sent under the auspices of the U.S. Agency for International Development). In a report, Dr. Ono and the BCS jointly worked out the details for extending the Bureau of the Census and Statistics' 1966 Working-Age Survey and converting it into a major...
Although the limitations of labor force surveys reside not so much in the concept of labor force but in their infrequency, it may be best to replace it with the concept of working-age population (say, 10 and above for Southeast Asia). In the latter, persons are not categorized as in the labor force or out, or as unemployed or employed, (as is the case in the labor force concept). Instead, all those 10 years and above are asked how much time during the week (either in hours in the urban areas or in fractions of a day, say one-fourth, in the rural areas) were spent on production, house work, studying and school work, sleeping, leisure and recreation. Details of each of the four activities can then be investigated as in the labor force concept for production activities. If there is a need to derive a labor force concept (say, to work out participation rates), some cut-off point may be specified. For example, those engaged in one-fourth or more of their day in production work, are to be "in the labor", while the unemployed may be defined as persons who are doing no production work (though engaged in other activities) and want a job.

The frequency of household surveys — twelve times a year — will enable the surveys to collect other information necessary for good manpower planning and other purposes. These are: (1) the economic activities of households, (2) the incomes, expenditures, and savings of households, (3) on nutrition, housing, and health of household members, (4) education and skills, and (5) on demography. The collection of all these data in each monthly survey will over-burden the questionnaire so that some of the above must be collected only once or twice in a year or in two or three years, especially activities which are not sensitive to seasonal changes, for example, on housing, health, education, skills and demography.

However, the data on household economic activities, incomes, expenditures, and saving are probably subject to seasonal fluctuations as much as manpower variables. Even here there may be no need to collect the information every year. In one year, the focus can be on household economic activities and the incomes derived from them, and the next year on the consumption expenditures and incomes. After some years of experience, with more knowledge about their seasonality, it may not be necessary to collect information on each item each month, but in

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5) Housework should be sub-divided into meal preparation, cleaning washing, etc.
alternate months. For example, some types of expenditures other than food may be less sensitive to monthly seasonality. With a monthly household sample survey, more knowledge as to seasonal patterns of various household activities in different regions of a country may enable the statistician to reduce the frequency of questions on activities sensitive to seasonal variations. Then, it may become possible to include other questions from time to time (to be discussed below).

Although we expect seasonal variations to be great in developing countries where agriculture and other primary industries predominate and where the forces of nature and traditions are greater than in developed countries, we have very little knowledge of the details of seasonality in household activities. Without this knowledge, not only manpower planning but policies for employment generation are difficult to formulate adequately.

The establishment of monthly surveys will make possible the hiring of a permanent force of interviewers. At the present time, since household surveys are infrequently conducted, most countries must resort to the hiring of a new groups of interviewers for each survey who must be trained every time a survey is conducted. Not only is the cost of training and supervision high but the quality of each interview is low. A permanently hired and trained group may enhance the quality of the data obtained, reducing costs of editing. Most important, these interviewers may be available for other surveys based on the households. And to these other surveys we now turn in the next section.

Other Surveys

In the developed countries, with an extensive net work of transport and communication, the distinction between rural and urban areas has become unimportant. Also the rapid rise of industry and the decline of agriculture have reduced the significance of villages and the rural areas. (In the U.S., for example, the villages have long disappeared). This cannot be said to be the case of developing countries where two-thirds to three-fourths of the population work and reside in rural areas.

Rural development has become the major plank in the development strategy of Southeast Asia. Though there are many surveys of individual villages or small groups of villages, there is no country with a nationwide, macro-survey of villages. Without this, the micro-surveys are of limited value for policy purposes, since there is no way of knowing the extent of or degree of representativeness of each village survey and thus generalizing with respect to the province, region or the nation as a whole.
To be useful for manpower planning, rural development planning must be detailed and specific. The usual, standard agriculture censuses and surveys based on Western needs and focused on commodity production statistics do not satisfy rural development needs. Beginning with the households in each village, the household surveys can obtain information on the environmental, social and economic characteristics which together with manpower, economic, income, expenditure, human resource, health, and demographic data (collected on each household in the villages) can go a long way to explain the variations in average household incomes for each village in each province, region, and the nation as a whole. It will make possible a typology of villages and classifications of districts and provinces. Unlike in the West, rural areas vary a great deal in weather, soil conditions, farm size, topography, water availability, transport facilities, communications, patterns of economic activities, crops and other output, ethnicity and religion, organizations and institutions — all factors affecting household incomes (besides factors affecting each member of the household).

As to urban areas, the surveys could generate data by size of cities and towns for each province, region and for the nation as a whole. Here, too, supplementary information should include data on the environmental, economic, social, and institutional characteristics of each urban unit which together with the information collected for individual households may be useful for urban studies and planning.

Another type of survey needed for manpower and other planning is opinion or satisfaction survey. In developed countries, the extensive and efficient network of mass communication media (radio, T.V., newspapers, etc.), transportation, and institutional arrangements (such as polls, elections, etc.), makes possible continuous exchange of information and dialogue between urban and rural areas, between the upper and the lower classes, and between the governing and the governed groups. Lacking these, developing countries do not have sufficient information as to needs, values, attitudes, desires, preferences, satisfaction, expectations, aspirations of various social strata. In setting-up the socio-economic plans for the early 1970's, it was necessary in Japan to hold a vast network of satisfaction

More detailed discussion on this point is found in H. Oshima and G. Rikken, "Social Science Research in Rural Development", soon to be published in the Philippine Review of Business and Economics.

The tabulation of village tables can follow the lines of establishment tables in industrial surveys, e.g. — villages by average household incomes cross-classified by characteristics such as size of farm, tenure, road mileage, water facilities, crops, etc.
surveys trying to find out the priority needs of salary employees, wage-earners, farmers, old people, students, and housewives. The quantitative information from the monthly household surveys often cannot be adequately interpreted and analyzed for policy and planning purposes, if they are not complemented with opinion and profile surveys regarding the precise economic (credit, irrigation, transport, extension, etc.) health, housing, educational training, recreation, cultural, and security needs and preferences of people, especially in the lower income groups. Not that the priorities expressed in the surveys must be followed by policy makers since some of them may be beyond the financial capabilities of developing countries and others may not be rationally ordered. But as the Japanese surveys indicate, the needs of different groups of households in different localities and circumstances are varied and complex (and usually moderate and rational), so that it is inefficient planning and programming to assume that policy-makers and officials in the national centers of government "know" these needs precisely and in detail. It seems incumbent that this way of inviting participation by a wide body of citizenry in plan formulation be introduced as soon as possible in countries of Southeast Asia where not only communication but the political processes operate so poorly and slowly.

As part of the above survey, a performance evaluation of institutions and organizations (government, semi-government, public, semi-public, and even non-profit private) may be desirable. In developed countries, this type of survey may not be necessary, largely because in the long, historical period of evolution, these institutions and organizations have had time to work out effective structures and methods of operations. But this is not so in developing countries. New institutions and organizations, to cope with new programs and activities have to be constantly examined, evaluated, and modified, to make them more effective in mobilizing people, in channelling inputs and in coordinating the delivery of outputs and services. They are more than mere catalytic agents; they are major inputs themselves, costly and requiring scarce resources such as trained manpower. They are strategic and critical in the success of developmental programs, whether this be in rural development (i.e., village associations, cooperatives of various kinds, rural banks, local governments, health units, rural schools, irrigation associations, youth and women's group, extension systems, fishery cooperatives, handicraft associations), in urban development, in family planning, human resettlement schemes, and cultural development. Since these institutions and organizations are as important as stock markets, banks, and financial institutions, performance evaluation surveys
need to be conducted and their results made public. In what precise form these institutional surveys would ultimately take remains to be seen, but to get some experience, it could be started as part of the rural and urban surveys of household. Ultimately, if this type of survey proves to be useful, it may have to be conducted separately by an independent commission.

As these monthly household surveys begin to generate data, new questions, issues, and problems are likely to emerge and the demand for more detailed and in-depth surveys may arise. This will be the occasion and opportunity for discovering innovative surveys which may become a permanent part of Asia’s statistical landscape. In this way, Asia’s statistical systems built originally on Western foundations can be modified and restructured as time goes on. Already a few attempts at innovations and modification can be seen, such as the socio-economic surveys of Ceylon, Malaysia, Thailand, and Indonesia. This year, the Philippines’ census bureau has undertaken for the first time a mid-decade population census in May and based on it, it is about to conduct a large sample survey of the economic activities of households in December, 1975 covering demographic characteristics, education and skills, and all economic activities of households ranging from farming, manufacturing, to service and wage and salary employment. Detailed information on the gross receipts, expenses and capital equipment of the economic activities are to be obtained. This information combined with the census of economic activities of corporate and other large enterprises are intended to give a complete coverage of Philippines’ economic activities, including the nature of the manpower participating in these activities.

In addition, East Asian countries such as South Korea and Taiwan have been adapting Japanese type surveys such as farm household economy survey, fishery household economy survey, small and medium enterprise survey, employment status survey, and others.

The Nature of the Benefits from Household Surveys

An objection that is sure to emerge from the foregoing suggestion is the large costs involved in a monthly survey of household. Presently, Southeast Asian governments are spending on the average about 1% of the total central government budget for the activities of the bureau or department of statistics. A monthly household survey (depending on the


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size of sample survey) may ultimately require an expenditure of 3 or 4\%.
Can such a rise in the cost of collecting information be justified?

Before discussing the benefits of such an expansion, it should be
pointed out that expenditures for statistical systems are subject to "indivisibilities" and "lumpiness" in ways similar to social overhead expenditures. Data on seasonally sensitive magnitudes such as employment and underemployment, incomes, expenditures, and savings, gross output, profits, and wages, are of limited value, sometimes of negative value — misleading, leading to wrong policies — when collected for a reference period of one to four weeks. (e.g., Thailand's low unemployment rate from the labor force survey). There is an accelerated rise in the value of these data as the frequency of their collection rises. Moreover, as each category of data is collected in relation to and in conjunction with other categories of data (e.g., manpower with demographic, human resource, and economic data), their usefulness for analysis is very much enhanced. And as the sample is enlarged up to levels useful for regional planning, the use made of the data multiplies. Probably, there are also economies of scale in the use of equipment and office space and in the employment of labor (due to specialization) in the collecting and publishing of data although they may not turn out to be as large as the indivisibilities and external economies generated. Thus, the meager benefits derived from existing data systems are due to expenditures for statistical compilations which are too small in scale, besides the inappropriate concepts and models used.

Unfortunately, like most public expenditures the indirect benefits are impossible to quantify even as rough magnitudes — even more difficult than expenditures for roads, communication systems, health and housing systems. For, the indirect benefits far outweigh the direct benefits. But even the direct benefits are difficult to measure, unlike educational expenditures. In such a situation, statistical expenditures are likely to be under-valued by governments and political leaders. Nevertheless, it is interesting to know that economies moving forward most vigorously are also countries which pay most attention to statistical systems, as for example, U.S., Japan and West Germany as compared to England, France and Italy. Since the benefits are not measureable, we attempt below to identify and list the benefits derived from a good system of data collection. Since it is not adequately realized that these benefits are extensive, we shall describe some of these at length.

In recent years, theories of economic growth (and development) have come to recognize the importance of manpower, human resource, and
institutional development and to put less weight on factors such as natural resources, capital formation, and technology, especially in analyzing the growth of developing countries. Although the inter-relations between all these factors are extensive and strong, the experience of the 1950's and 1960's tends to show that the availability of natural resources, capital and technology is not sufficient without the development of human resources and of effective institutions within which the human factor must function. Natural resources, machines, and technology are not utilized efficiently, effectively, and maximally if the agent using these resources is not properly trained and motivated. Moreover, even if the analysis reveals close association between capital formation and the growth of GNP, and even if this association can be interpreted to imply causation, it is not enough since we are still faced with the question why is the capital formation so high.) Investment as a cause is only proximate and we need to go beyond or behind or surrounding investment as a proximate cause, to be helpful for policy formulations.

Moreover, the rapid rise in population and, in Asia, the already high densities (measured in man-land ratios) have forced countries to shift to labor-intensive strategies of development, with strong emphasis on food production. A rural based, labor-intensive strategy (even more so than an urban-based, capital-intensive strategy) enhances the role of human resources and institutions in growth and development. For, efficiency in this strategy must rely heavily on human efforts and less on increased capital and high technology. And, a basically labor-intensive strategy will have to be maintained for at least a generation, although gradually shifting to a more capital-intensive one when full employment is approached. Reinforcing this is the growing concern for social development (including family planning) and social welfare, which in turn further raises the need for human resource development. We have, therefore, entered a period when information on manpower, human resources, and institutions are in great and growing demand. It is in this context that we must view

9) For example, accelerated capital formation has been identified as the major factor underlying Japanese economic growth in the past century. But what factors and conditions made possible accelerated investment? Possible answers to this question may be: the propensities of the Japanese to save much of their income, their habits of efficient, disciplined, and cooperative work which enabled them to use the machines, technology and meager natural resources effectively, operating within the framework of appropriate institutions and organizations.

the various types of benefits which can be derived from a good and extensive system of household surveys. (The benefits to be derived from good household surveys in the area of human resources, manpower, and social development have been pointed out above).

First of all, statistics are vital inputs in the production of many types of economic services that are of great value. In the framing of policies and plans, their administration, management, and implementation, and finally in their evaluation and assessment, good data and information play an essential role. Public agencies, business enterprises, and households must carry out all these functions, and to do these will require good data on households which always comprise the largest sector in the economy. The use of household data is so ubiquitous and widespread that there is a tendency to overlook the importance of information from the household sector. For example, it is not sufficiently realized that the systems of national accounts, input-output matrix, and money-flow accounts are difficult to construct without extensive information on households. The major reason for the weakness of these systems in Southeast Asia is the absence of extensive data on household consumption and production.

Another group of data for which household information is essential are the various indexes — of production, productivity, wages, prices, cost of living, social welfare, etc. To be comprehensive enough, these indexes must cover the production activities of the households or the consumption patterns for weighting patterns. Statistics of consumption and savings are also dependent on households, and without monthly surveys, these statistics are of dubious value.

It should be kept in mind that these and other statistics are in great demand not only by governments and other public agencies but also by business enterprises for policy determination, for formulating plans for expansion and contraction, for management and evaluation. For example, in marketing information on households as the major consumers is all-important. Efficient operation of large business concerns is not possible without adequate statistics, and the latter must cover the largest buyers, namely, the household sectors.

In the area of education and training, statistics of households are fundamental. This is especially true in social science education and train-

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12) In the U.S., the biggest demand for economic statistics comes from the business sector.

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ing where both the efficiency and quality can be significantly raised. This is because the teaching material used in the courses can be substantially improved with better concepts, more appropriate theories, and more penetrating analyses. This benefit is not confined to the teaching and training of social but extends to any field that deals largely with human problems, such as in medicine, home economics, agriculture sciences, law, etc.

The usefulness of household data extends to nonformal education. For example, the effectiveness of the mass media in national development can be greatly improved with better statistics of household behavior. Knowledge of the habits, values, attitudes, desires, needs, aspirations of household members is indispensable to working out good media programs for modernizing social behavior for rapid national development. (This knowledge is also necessary for policy-making and implementation).

Finally, better understanding of household behavior is fundamental in bringing about higher levels of rationality in social and political thinking and action on the part of the citizenry. Thus, one can say that if manpower development is conceived in a broad way and not limited to training for economic purposes only the statistics of manpower is all-important. (And it should be thought of as broadly as possible). Economic behavior is closely interrelated with social and political behavior and it is extremely difficult to change economic behavior without changing the other types of behavior. Economic man is just one aspect of total man; the modernization of one aspect cannot go very far or become permanent and sustained without changes in the other spheres. In fact, an unbalanced and one-sided change may be dangerous. This total view of manpower development calls for an integrated approach to manpower training, in which the statistics of manpower and human resources are strategic in the interplay of forces in national development.

In sum, this manner of looking at manpower and household statistics implies that the statistical system is a part of a system of social infrastructure as necessary as transportation, communication, irrigation, schools, hospitals, for the transformation from a traditional to a modern nation. The benefits that can be derived are enormous and valuable, provided that a good system is established and maintained. Like poor transport systems, inadequate statistical systems yield little benefits which can even be negative if they give misleading information and wrong data. In the

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latter case, wrong policies and faulty administration and implementation can lead to untold losses. And if the external economies are as large as we think they are, the skimping on expenditures on statistical systems — represented by present levels in national budgets — may be a mistake.

What may be missing in Asia is an institutional mechanism by which the varied inputs and outputs of the statistical system are periodically examined by both the suppliers (the statisticians) of statistics and users (economists, sociologists, etc.). The development of the U.S. system of economic statistics was hastened by the annual meetings of the Committee on Research in Income and Wealth of the National Bureau of Economic Research which brought together users and suppliers. It is hoped that a regional group of the International Association for Research in Income and Wealth (which met in Hong Kong in 1960) headed by Professor Kazushi Ohkawa will be able in the coming year to serve this purpose.]*)

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14) No attempt has been made to discuss demographic problems, but if it is true that demographic variables are affected by transformations of economic, social, and cultural systems taken as a whole, the compilation of human resource statistics in an integrated household survey as argued in this paper may be valuable for studying demographic variables within the household survey. But this problem is too broad to be adequately dealt in the context of this paper.

15) In the concluding note of his Nobel Memorial Lecture, December 11, 1971, Simon Kuznets noted that: "For the less developed countries the tasks of economic research are somewhat different (from the developed countries). The great need is for a wider supply of tested data "...", stating that "..... the stock of data and economic analysis is far poorer .......". Elsewhere in the lecture, he underscored the need for greater attention on the household "as the forces of economic decision not only on consumption but also on investment ......." ("Modern Economic Growth, Findings and Reflections", reprinted in his, Population, Capital and Growth, Selected Essay, N.Y., 1973, p. 183). In the first paragraph of his lecture, he defined modern economic growth as "based on advancing technology and the institutional and ideological adjustments that it demands", later remarking that advancing technology is the permissive source of growth, a necessary condition but not sufficient.