NEW CONCEPTS IN STATISTICAL WORK FOR THE LDCs

By

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Older economists need not be reminded about Simon Kuznets' contribution to the field of economic statistics. He is often referred to as the father of modern national accounting, having worked out the concepts and methodology of the expenditure side of the national accounts (his 1935 estimates are cited in the *General Theory* of Keynes), concepts and measurement of income distribution (his total disparity index is probably the best measure of inequality), the statistics and analysis of the long swings (the Kuznets' cycles), and concepts and measures of long-term trends. It is, therefore, most reassuring that during the lecture published in this journal, he advocated the need to search for statistical concepts more suitable for the socio-economic conditions prevailing in LDCs and more useful for the solutions of problems confronting LDCs, than those he helped to work out for the industrialized countries. In this short note, I would like to work out the operational framework and definitions of some of the examples of statistical concepts he mentioned in passing in private conversation, if not in the lectures. Amongst others he cited two which are worth discussing in detail. In addition, I would like to mention others which seem to be needed for answers to urgent problems in the LDCs in the 1980s, as examples of logs in pressures demanding appropriate data by governments, which Kuznets emphasizes.

One of the statistical frameworks put forward by Kuznets as useful for demographic, sociological, and distributive studies was a classification by socio-economic classes. In the LDCs, because of the wide differences in average family incomes of the socio-economic groups, this classification can be more useful than the size distribution of family incomes for a number of purposes, e.g., analysis of consumer expenditure patterns and savings, morbidity, mortality, fertility, education, labor force participation, employment, poverty, etc.[1] Some years ago, I attempted to work out a disaggregation of the household account in the system of UN national accounts along

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[1] Kuznets also feels that the size distribution of income does not take

socio-economic lines in a paper presented at the First Asian Conference on Income and Wealth.[2] In that paper, the household accounts were decomposed into 4 socio-economic groups in the agricultural sector and 3 groups in the non-agricultural sector. For each of the seven groups a system of three accounts were constructed (production, consumption, and investment accounts) depicting each group's production, consuming and saving activities.[3]

For some purposes, it seems better to try out an alternative system of socio-economic grouping. Since 1960, development planning has become increasingly oriented to dichotomizing sectors into rural and urban, and emphasizing the importance of (subnational) regional planning. Thus, instead of agriculture and nonagriculture, it may be better to divide the economy into rural and urban, standardizing the definition of urban areas into places with more than 20,000 people (or 30,000 and so on).[4] The rural sector may include groups of households headed by (1) absentee and nonfarming land owners, (2) larger farmers, (3) medium farmers, (4) small farmers, (5) tenants (with share and leaseholders), (6) landless workers, and (7) nonfarming workers (which in turn may be classified variously). The urban sector may include (1) employer households (subdivided into large, small, medium employers), (2) own-account heads (subdivided into those working alone and those with family helpers), and (3) employee heads (subdivided into salary earners, skilled workers, and unskilled workers). All of these will have to be operationally defined, but the intention in categorizing them is to illustrate how valuable such a system of classification can be, and if the sample is large enough, each region and even each province can work out these groupings for their own needs. And for each major grouping, a type of survey collecting information not only on income and personal expenditures but also on production and investment activities of

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into account lifetime income distribution and that average family incomes in the socio-economic groups reflect better lifetime incomes.

[2] *Asian Studies in Income and Wealth*, International Association for Research in Income and Wealth, Asia Publishing House, New Delhi, 1965 Chapter 1, "National Accounts for the Analysis of Asian Growth," pp. 1-47, edited by V.K.R.V. Rao and Kazushi Ohkawa.

[3] See *ibid.*, for definitions of each item entered into the three accounts for each group.

[4] The reason for this is that in LDCs, especially in monsoon Asia where rural densities are the highest in the world, the small size of farms compelled peasants to combine agricultural activities with non-agricultural activities — much more so than in other LDCs or in industrialized countries.

each category can fill in all three accounts as suggested in the reference above. Another cross-classification can be by size of household income for each of the major groupings, as long as the income brackets are kept to a minimum, say quintiles.[5]

The second suggestion by Kuznets that the enterprise sector (as distinct from the household sector) be divided into modern, semi-modern, and traditional industries is more difficult to work out operationally. The purpose is to see which of the three types of industries are contributing most or least to the growth of GNP, to saving and investment, to the creation of employment and wages paid, to productivity per worker, to the use of capital, to the sale for domestic or for export markets, and so on. For this purpose, we must deal with the income originating accounts of the summary of national account which deals with the establishment as the accounting unit. Various criteria can be thought of as the basis of demarcating establishments as modern and traditional. One basis is by size of establishments as given in the economic and industrial censuses and surveys, with size measured by number of employees or by the size of capital used. I would suggest that we attempt to define as modern those establishments using predominantly large-scale mechanized technology, as semi-modern those using predominantly small-scale mechanized technology; and as traditional those using hand tools including the use of draught animals. The reason is that these definitions correspond to the three basic stages of growth, namely, underdeveloped, semi-developed, and developed. It will be necessary to supply more operational criteria for each of the nine International Standard Industrial Classification (one digit) categories. The division between traditional and others is the use of human and animal power as against the use of non-human and non-animal power in the basic operation of each industry — in agriculture, the use of plows by animal power will be traditional, hand-driven tractors will be semi-modern, and bigger ones which must be mechanically driven will be modern; in fishing, motorized small boats will be semi-modern and trawlers with engines within (and not outside) the ship will be modern, and so on. For each basic industry various detailed classifications can be worked out so that the income originating in the national account will be subdivided into three groups.

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[5] The Philippine 1975 Survey of Household Economic Activities with a very large sample may have all the necessary data for all the above classifications, down to the provincial level. It is hoped that the National Census and Statistics Office of the Philippines will try to experiment with such a pioneering statistical effort, even though the data may have various defects.

Another way of getting at traditional, semi-modern, and modern is to look at the human capital embodied in the labor force employed in the establishment, if it is difficult as in the service sector (public, commercial, professional and personal services) to judge by the technology embodied in the capital used. For example, we may classify an establishment whose employees have 8 years or more average years of formal schooling completed as modern, and those using workers with less than 8 average years to four as semi-modern, and those with less than 4 average years as traditional. This human capital approach can supplement rather than substitute for the mechanization approach.

One importance of this classification is the information we can get between labor and capital intensive establishments. We need this information for the decade of the 1980s when the "labor force explosion" will be at its worse, so that we need to find out which industries are creating jobs and what types of skills are needed to be formed. Also once we get the above information, it may be possible to classify consumption expenditures into modern, semi-modern, and traditional; and consumption goods produced as labor-intensive or capital-intensive. Thus, personal consumption expenditures will become more useful than as currently presented in the UN accounts.

Elsewhere I have argued that labor force sample surveys in Asian countries must be held more frequently than once or twice or even four times a year.[6] Unlike in the industrialized countries, in the predominantly agricultural countries (especially in the monsoon belt of Asia), seasonality is extensive and pronounced; and unlike employment in large firms, small firms hire intermittently and irregularly, by the month, by the week, but mostly by the day (or even half-day). This means that not only *underemployment* and part-time employment is extensive during the year, but also job-switching, multi-occupations, and getting in and out of the labor force are frequent. Unfortunately because of greater regional heterogeneities in LDCs than in DCs, the sample must be large to cover different localities.

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[6] See my "Need for an Integrated Statistical System for Manpower Planning in Southeast Asia," *Economics and Finance in Indonesia*, March 1976. Here the exercise is to estimate full-time equivalent employment and full-time equivalent unemployment, taking as full-time weekly hours the modal number of hours worked in each industry, (preferably 2-digit ISIC) with appropriate adjustments for housewives and young workers who are not available for full-time work.

Even more serious than all the above put together may be the absence of qualitative surveys, (opinion, satisfaction, attitudinal, perspective and needs survey). In the DCs, there is a wide coverage by the mass media (TV, radio, newspapers, magazines, etc.) of the various views, opinions, needs of different classes of people in different sections of the country. This is not true in LDCs where not only the mass media but also the transport systems are severely restricted for various reasons. Moreover, the elite group which is largely responsible for policy- and decision-making is likely to be urban based, of higher income and higher educational origin with poor knowledge of and limited communication with the large mass of lower classes who comprise the main target groups in programs of rural, urban, and socio-economic development. Their excellent academic training, usually Western-oriented, does not include intimate knowledge about the conditions of work and life of the lower-income groups and their ways of thinking, especially in the rural areas. The numerous instances of project failures (such as low-cost housing, slum clearance, rural resettlement, cooperative and farmer associations, rural health service, and so on) is partly due to the misunderstanding of government officials. Surveys to obtain information as to desires, needs, values, attitudes, preferences, priorities, satisfactions, expectations, and so on of target groups in various projects are badly needed by governments, if they are to succeed in rural, urban, and other socio-economic projects which are most difficult to implement adequately. Of course, all the priorities, preferences, and opinions expressed in surveys cannot be accepted by policy-makers at face value for various reasons, (too expensive to implement, lack of available technology and manpower, or too irrational), but scattered surveys here and there indicate that they are extremely valuable as guideposts for the planners and executors of projects, often times resulting in considerable savings in funds.

The Japanese Government in the latter 1960s, in planning and implementing a very comprehensive system of social welfare, wisely decided to undertake a series of extensive surveys to find out the real and urgent needs of elders, wage-earners, farmers, students, housewives, the poor and the sick, etc. They revealed to the committees which were set-up to draw up plans, a surprisingly varied and complex structure of needs and aspirations, by no means immoderate and irrational.

Another type of qualitative survey may prove to be valuable for efficient and effective administration. Unlike developed countries, the LDCs officialdom and bureaucracies have had limited experience

in self-government and are poorly trained in administration, especially of rural, urban, and socio-economic projects. So badly are these projects managed and operated that there is a wide-spread consensus that the major stumbling block to the development of LDCs is not the severe shortage of capital, skills, and technologies but the shortage of institutional arrangements, largely in the administration and implementation of programs and projects by the governments and other public bodies. Statistical agencies can conduct surveys on the performance of important organizations such as rural banks, cooperatives, extension services, health units, schools, and so on. In fact these surveys can go beyond these organizations and extend to government agencies such as police, local government officials, tax and custom collectors, and the like. The surveys can ask at random opinions from the users of these services as to the effectiveness, efficiencies, and adequacies of the agencies' and organizations' operations, much as the interviewers at airports ask returning tourists how satisfied they were about various facilities and what improvements they can recommend.

Of course, these qualitative types of survey are not the traditional functions of statistical agencies in most developed countries and objections may be raised as to the wisdom of statisticians stepping into the role of evaluators of other government agencies and public institutions. Some dangers may exist but it is to be noted that nearly all statistical surveys have, to a lesser or greater extent, evaluative significance. Population censuses are evaluative of family planning programs, agricultural censuses of agricultural programs and land reform, household income surveys of five-year plans, and so on. As long as the interpretation of survey results are left to the chief executives of the government and to the main legislative bodies, the danger is minimal and the benefits can be enormous. The role and function of statisticians and statistical agencies in the solution of the most serious problems confronting LDCs — probably much more serious than the problems for which quantitative surveys are conducted — will be greatly enhanced.

It is clear by now that for heavily densely settled rural Asia, the success of rural development will spell the difference between rapid and slow growth of the economy in the 1980s and 1990s. But rural development in South and Southeast Asia is difficult to achieve because of institutional reasons: inefficient distribution of credit, of fertilizers, of insecticides, of extension services, of irrigation water; and the ineffective functioning of rural banks, cooperatives, local governments, regional planning agencies, schools, health units,

fishery associations, and so on. Unlike in East Asia, the long-term experience with these projects and programs is lacking, and the mass of small peasants on whom the success of rural development hinges are afraid to speak up against the widespread discrimination in the distribution of these services and against the abuses in the organizations.[7] Perhaps the best way to improve the workings of rural institutions may be through the collection of information and data on the performance of these institutions and the dissemination of the results.

Nor do effective mechanisms exist for the real participation of small peasants, and for the expression of views of landless workers to development planners in the rural areas. It is going to take some time before regional planning councils and rural organizations become effective channels through which projects and programs meeting the needs and aspirations of the weaker groups can be expressed, if the pre-war and postwar experience of East Asian countries is an indication. Centuries of dependence and subservience cannot be overcome in a few years or even a decade. If so, the statisticians' function to collect data and other information to solve urgent problems must be enlarged beyond the customary ones as found in Western countries.

[7] In a paper summarizing the results of the 1976 Rural Development Conference by the Council for Asian Manpower Studies, I have found that institutional problems usually lie at the bottom of problems of insufficient resources, capital, skills, and technologies in rural development.