Asian Socioeconomic Development

A National Accounts Approach

Edited by
Kazushi Ohkawa and Bernard Key

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Preface

The papers collected in this volume were first presented at the Second Asian Regional Conference of the International Association for Research in Income and Wealth (IARIW), held April 3–7, 1977, in Manila. The conference was co-sponsored by the School of Economics, University of the Philippines, and the International Development Center of Japan (IDCJ).

The First Asian Regional Conference of the IARIW was held in Hong Kong in 1960. Selected papers from the Conference were published in 1965 as *Asian Studies in Income and Wealth,* edited by V.K.R.V. Rao and K. Ohkawa. Regrettably, a second conference could not be held in the region as soon as had been hoped. In response to the increasing need felt by some IARIW members, a meeting to establish an organizing committee was held on 29 November 1976 at the School of Economics, University of the Philippines. At that time a six-member Organizing Committee was selected: the four session organizers (listed below) together with M. Mangahas and K. Ohkawa, as Chairman. Preparation was begun for the conference, and it was unanimously agreed that the subjects chosen for investigation should have close relevance to contemporary development problems of Asia and the Pacific region. Accordingly, plans were made for the Conference to consist of the following four sessions: National Accounts Framework for Developing Countries (organized by M. Kurabayashi); Measurement of Social Development (organized by M. Mukherjee); Income Distribution (organized by J. Encarnación); and Problems in Uses of National Accounts for Planning (organized by H. T. Oshima).

The Organizing Committee took the responsibility of selecting the papers for publication, relying upon the initial recommendation made by each session organizer. Selection not only was made on the basis of quality, but also took into account other factors such as the representativeness of the problem and its significance for future studies in the Asian context. The Committee requested Ohkawa to undertake the task of editing these papers in collaboration with Dr. Bernard Key.

The contents of this volume essentially follow the order of presentation at the Conference. No written papers were requested for the fourth session, on the uses of national accounts for planning. The discussion which took place at that session is summarized in the Introduction, and Oshima's remarks on national accounts and planning appear as one of the Additional Remarks at the end of the volume.

Two additions to the basic conference papers have been made for this for this volume. One is the description by Shimizu of the national accounts system and its evolution, which has been added as an Appendix to Part I; the other is a comment by Ohkawa on the importance of households to national accounts, which appears as one of the Additional Remarks at the end of the volume.

We owe a great deal to Encarnación and to Oshima and Mangahas who, with the help of their younger colleagues, made such careful preparation and administered the Conference in such a well-organized fashion. We also wish to acknowledge the various contributions made by Mr. Yutaka Shimizu at the preparatory stage with his work for the Organizing Committee, during the Conference in his role as Executive Secretary, and after the Conference in assisting with the editing. Finally, we would like to express our appreciation to Ms. Tamiko Sakatani for her invaluable secretarial assistance.

Generous support for the Conference has been provided by the Ford Foundation and the Japan World Exposition Commemorative Fund. The Asia Foundation kindly furnished support for the Organizing Committee. The publication of this volume was supported by the International Development Center of Japan. Neither the Conference nor the publication of this voume would have been possible without this assistance, for which we are deeply grateful.

Kazushi Ohkawa
Bernard Key

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Introduction

In Asia, the most populous part of the world, a number of "developing countries" have inaugurated modern economic growth in tandem with their struggle to attain political independence in the decades since World War II. Most of them have achieved the initial growth acceleration needed to get their economies moving towards further development through economic modernization. In the postwar quarter-century, the pace of their economic development has been fast, despite the unprecedentedly strong pressure of population growth—faster, in fact, than the earlier development of the present industrialized countries. However, development has not been without serious problems. Among them, two are particularly relevant to the subject of this book: a widening range of growth rate differentials among industrial sectors, particularly between the modern and the traditional sectors, and the lagging of social development behind economic growth. In recognition of the fact that these two phenomena are not unrelated, "socioeconomic development" rather than "economic development" has recently become the right term in which to present the problem. Our purpose is to contribute to better performance in socioeconomic development through making progress in the national accounts approach.

National accounts, taken as a whole, comprise a conceptual system, consistent and articulate, with which macro-sectoral economic performance can quantitatively be described. The system has a long prewar history of application to the developed countries. It began, however, to be applied much more widely to contemporary developing countries in the postwar period. This process of "diffusion" has both extended the coverage and estimates of national accounts and improved their statistical reliability. They have contributed greatly to the formation of development plans and policies of governments as well as to augmenting systematic knowledge about the development process.

Nevertheless, economists and statisticians specializing in this field have faced a number of problems in responding to the rising expectations of what can be achieved during the development process in the course of applying the refinements made in the national accounts themselves. The internationally standardized system of national accounts is quite new (for a detailed explanation, see the Appendix to Part I which begins on p. 107) and has raised a number of problems to be solved during the transition from an old to a new system. The social aspect of the accounting system has lagged behind the economic aspect, both conceptually and statistically; greater efforts are needed to attempt to come to grips with the real nature of social development.

These challenges, one may say, are not specific to the developing countries, but are rather of a general nature, requiring the attention of developed countries as well. However, it is our view that for most of the developing countries in Asia these challenges have different and more serious implications. These countries face, so to speak, a trinity of challenges in implementing the system of national accounts: the requirement for improving estimates at the conventional level; the larger inputs required by the new system of the national accounts; and the greater efforts needed for introducing and systematizing the social development approach. The situation of course is not uniform but rather differs widely among the Asian countries, even apart from the somehow exceptional case of Japan. On the one hand, a number of countries still have serious problems in improving the statistical reliability of such basic data as that on consumption, investment, and even output. Even for the countries which can collect reliable data, conceptual and statistical problems are still serious, especially in estimating activities of the traditional sectors. On the other hand, a few countries have already started to construct an integrated system of accounts. These differences in level are one of the major reasons why the exchange of information among countries is beneficial.

The contributors to this volume have concentrated their attention on four aspects of national accounts: their applicability in general to developing economies; the measurement of social development; the analysis of income distribution; and the use of national accounts for planning in the developing countries.*

* Our summary descriptions of the papers in this volume are taken largely from session summaries prepared for the Second Asian Regional Conference on Income and Wealth by Y. Kurabayashi and K. Sato (Part I), M. Mukherjee and A. K. Ray (Part II), and B. Barros (Part III and the discussion on planning).

National Accounts Framework for Developing Countries

In the construction of national accounts and in the collection of data for that purpose, the developing countries face particular problems. The uniform System of National Accounts published and utilized by the United Nations establishes a basic framework which must be adhered to in order to maintain the usefulness of the accounts in cross-national comparison of economic data; however, a number of structural features of the developing economies differ from those of the "standard" economy which inspired the SNA system and which is most easily adapted to it. Moreover, in the developing countries perhaps the most important application of national accounts data is to planning for economic development; thus there is often a need for kinds of data which are not integral parts of the SNA system.

With these special requirements in mind, much of the work in national accounts theory which has been done in Asia during the past five years has been focused on the construction of a national accounts system for developing economies—one which is compatible with the SNA but tailored to the special requirements of rural and developing economies. In this section, four authors present their recent work and thinking on this line of research.

Uma Datta Roy Choudhury discusses some of the problems and advantages in using a system of accounts suited to the special characteristics of developing economics which she and her colleagues have designed. The proposed system departs from the SNA in the following instances: a systematic distinction is made between goods and non-material services; a uniform set of transactors is employed for all accounts, classified into three mainly institutional groups (distinguishing, for example, between modern and traditional forms of production, between wage payments in cash, in kind, and self-employed income; between market transactions, barter, and own consumption); own capital production appears both in investment and saving. The proposed accounts are simpler than those of the SNA in that "commodities" and "industries" are not separated and that the sector classification is based on establishment units.

Choudury points out that these new accounts should be suitably adjusted in response to the special characteristics of individual developing countries, but that considerable flexibility must be allowed in order to make intercountry comparisons possible. Special features of developing countries that need to be highlighted in a generalized system of accounts include the following characteristics: (i) unincorporated enterprises are important; they form the "informal" sector within the household sector (without industrial classification); (ii) a few key commodities or industries that dominate economic activities in developing countries should be shown in separate accounts, probably as sub-sectors within broad sectors; (iii) particular types of organizations (*e.g.* multinational corporations) might be shown in separate accounts within individual sectors or within the economy as a whole; (iv) enterprises may be classified by ownership within each sector as it is useful for public and private sectors to be distinguished by industry to the extent possible; (v) the self-employed should be set up as a separate category and their income should be listed as mixed income; (vi) the distinction between goods and non-material services should be eliminated. The new accounts are a sub-system of the SNA and embody all its basic features; they are, however, flexible enough to allow modifications by individual countries.

The peasant economy differs from the urban economy in that production, consumption, and investment decisions are made by a single economic unit, the peasant. Theories of the peasant economy that emphasize this difference are, however, not supported by the systematic collection of data. The Hayami paper reports an experiment conducted by a team he headed at the International Rice Research Institute to collect such data continuously over one year in a Philippine village.

The sample consisted of 12 households (4 large farmers, 4 small farmers, and 4 landless workers) out of the total 95 households in the village. The households prepared daily records of work and transactions under the weekly supervision of a full-time investigator. Six accounts are constructed from these records in the fashion of the SNA; they treat (1) agricultural production (rice and non-rice), (2) non-agricultural production, (3) income-expenditure, (4) capital production, (5) saving-investment, and (6) outside-of-household activities.

The important features of the accounts include the following: (i) income and saving are gross; (ii) the capital production account reports the amount of one's own work; (iii) imputations are made to farm labor and rice. For consistency checks, monthly cash and rice balances reported by respondents were examined. When significant discrepancies were discovered, re-interviews were conducted to eliminate from the records as many inconsistencies as possible.

The tables given in the paper present major findings concerning the value-added ratio, factor shares, the propensity to consume and the like. They reveal that the results are plausible. This survey represents a type of research which is essential for improving the quality of national income statistics in developing countries.

V. V. Divatia summarizes flow-of-funds studies of the Indian economy carried out by the Reserve Bank of India since 1956. The studies divide the economy into six sectors: two financial (banks, other financial institutions) and four non-financial or real (corporate business, government, government enterprise, households). Intrasector flows (*e.g.* the borrowings of households, including unincorporated businesses, from moneylenders) are netted out. Flow-of-funds data reveal increasing monetization in the economy over the past two decades, which in turn reflects the creation of financial institutions to assist in economic development. An increase in the FIR (Financial Inter-relations Ratio) also indicates the growing complexity of the financial system.

Flow-of-funds tables can be applied in a number of ways. For instance, a cross-country regression on the relationship between the FIR and per-capita income was made to ascertain India's position with some international perspective. A flow-of-funds table can be employed like an input-output table in determining how savings are distributed over the four real sectors for a given set of investments undertaken by the same sectors. The exercise also reveals individual cells in the table. It can be applied to estimate sectoral composition of investment for a given set of savings. However, the flow-of-funds table is less stable than the input-output table.

Finally, Divatia notes the effect of data limitations. For instance, differences in valuation between lenders and borrowers (*e.g.* equity issues) make the two sides inconsistent. Individual sectors are not as homogeneous as is desirable. Because the household sector not only comprises activities of unorganized industries, small businesses, and moneylending operations but also includes those of non-profit-making institutions, it is extremely difficult to maintain functional and institutional homogeneity.

Kazuo Sato is concerned with theoretical issues in measuring real national product from the production side. Some economists point out that the double-deflation method can pervert real value added. Sato contends that this potential perversity does make invalid the concept of real value added, showing that the derived real value added becomes immune when measured on a Divisia index. The minimum requirement justifying the Divisia index is the equality of the marginal products of intermediate inputs and their relative prices. The Divisia index is also uniquely determined if the underlying production function satisfies a certain separability condition.

Analogous to the concept of real value added, real quasi-rents are also a possibility. In this case, real quasi-rent is measured as gross output less the contributions of intermediate and labor inputs to production;

this also can be expressed in the form of a Divisia index. It is shown that the Divisia index of real quasi-rents is unique if and only if in the underlying production function constant returns to scale are maintained with respect to capital inputs and capital inputs are separable from other inputs. Real quasi-rents are free from the measurement problems of capital inputs and represent the limit to which one can go without knowing capital inputs.

The measurement of total factor productivity depends upon many more assumptions about the production function and market pricing. The difficulty is with the quantification of capital inputs because they are not malleable, and heterogeneous items can no longer be summed up in an index which is invariant. In the final part of this paper, it is shown that the assumption required for the measurement of real value added and real quasi-rents is that the underlying macro production function remains "invariant". The invariance requirement is satisfied if and only if the efficiency distribution of firms in the industry is invariant in its relative form. The macro production function that provides the basis for the analysis in this paper is an ex-post function which has both advantages and disadvantages; these will become clearer as work continues on the development of a comprehensive national accounts theory.

Measurement of Social Development

As economic development is measured and studied with increasing precision, its close relationship with social development has become more and more evident. The importance of social change as an integral component and not just a by-product of economic development has been widely recognized. Thus, paralleling the development of a national accounts system, work has begun on developing a framework within which the components of social life and well-being can be quantified, evaluated, and compared. This work is most commonly known as social indicators research.

In the three papers which follow, the problem of integrating social and economic data into a coherent system is approached from several angles.

Yoshimasa Kurabayashi's detailed paper aims at proposing a synthetic approach for measurement of economic and social performance of an industrially developed society like Japan and, to this end, examines the UN proposal for a System of Social and Demographic Statistics (SSDS) as well as the details of the National Bureau of Economic

Research (NBER) project where emphasis is placed on relating social indicators and social statistics directly with the national accounts.

Subsequently, the author takes a consolidated approach which is a synthesis between the SSDS and the NBER approach and is a mutually interlocking framework for the measurement of economic and social performance. He argues that it is possible to present the details under this system if data can be collected under the auspices of projects similar to the Basic Survey of Social and Community Life initiated by the Bureau of Statistics, Office of the Prime Minister, Government of Japan. This survey provides considerable information for the construction of time budgets, which is an essential part of the SSDS.

The system devised by Kurabayashi indicates the approach to be taken in the study of social welfare. Given the present state of data systems in developing countries, however, such detailed studies on the subject can immediately be carried out in great detail (in terms of the individual's way of living and utilization of leisure) only in countries like Japan. For developing countries these can serve as a guide, but it will be quite some time before such detailed surveys can be undertaken and the individual's welfare and life style analyzed.

M. Mukherjee and A. K. Ray focus more closely on the problem of choosing indicators and constructing an index for the measurement of socioeconomic development. They suggest a method of constructing a composite indicator of the standard of living in which the chosen variables are weighted statistically in an attempt to avoid subjective judgment.

Mahar Mangahas describes the social indicators project which he was instrumental in designing for the Philippines, outlining in detail the work done on the subject and the survey undertaken to study the living conditions of the people. The variables used in the Philippine analysis include not only health, education, income, and so on, but also political freedom and justice. Mangahas makes a strong case for the usefulness of social indicators data to those in policy-making positions, and states that commitment to the quantitative measurement of progress in an area of social concern should be used as a yardstick by which to measure seriousness of government purpose in tackling social problems.

It is clear that much work remains to be done in the measurement of social development; there is still ample room for disagreement on the types of variables which should be used in constructing indices, for example. However, the integration of social change with economic development is clearly an important and useful step in the analysis of national and cross-national economic data.

Income Distribution

The papers in Part III focus on the problem of income distribution, analyzing past trends in income inequality in five Asian countries within the framework of income growth and structural change.

V. V. Bhanoji Rao and M. K. Ramakrishnan argue that for Singapore there was no discernible relationship between reduction in income inequality and economic growth for the period 1966 to 1975. The authors advance the proposition that structural change, defined to include changes in the characteristics of income recipients as well as the composition of income, is the basic cause of changes in income inequality and that "...depending on the direction in which all other factors change, one may or may not find a reduction in income inequality over a period of GDP growth." In this case, the most important of these "other factors" were the increase in the female labor force participation rate and the changes in the employment structure by sector (from tertiary to secondary) and by occupational status.

An interesting aspect of the paper is the attempt to deflate the size distribution of income in order to arrive at trends in inequality in real terms. By computing a consumption class-specific price index from consumption patterns obtained in a household expenditure survey, Rao and Ramakrishnan find that real income Gini ratios exhibited similar but smaller declines. The desirability of such analysis, for over-time and cross-country comparisons, cannot be overemphasized, although many difficult questions arise. For example, when price indices are defined in terms of consumption groups and when no allowance is made for over-time household mobility between nominal income classes which make for modifications of the consumer basket in any income class, then such indices may describe consumption patterns remarkably well but may not be particularly demonstrative of price variations.

L. C. Chau's paper is a progress report on his study of the effects of industrialization on Hong Kong's income distribution from 1961 to 1971. From his examination of the relevant statistics he concludes that changes in occupational status and in the distribution of education among workers, in addition to narrowing inter-sectoral income differences, all promoted greater income equality. It also seems that growth has favored industries wherein income concentration has been lower.

Chau's conclusions are perhaps least debatable when applied to the distribution of wages. As he himself points out, there is no conclusive evidence on the trend of overall income distribution (especially between 1966 and 1971) since the income question in the surveys conduct-