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PREFATORY NOTE

This volume of *Studies in Income and Wealth* is devoted to a discussion of the comparability of national accounts. It contains six of the papers delivered at the sessions of the Conference on Research in Income and Wealth held in October 1954, together with the comments of participants. Richard Ruggles served as Program Chairman and John W. Kendrick as editor of the volume.

Introduction

JOHN W. KENDRICK
NATIONAL BUREAU OF ECONOMIC RESEARCH

INTERNATIONAL developments of recent years have intensified the need for closely comparable national economic accounts. National income and related measures are being used for administrative and policy purposes by international agencies, and as a means of appraising the results of economic programs. Social scientists are interested in comparable national economic statistics as a means of analyzing the economic development of nations. Unless the economic accounts are comparable, their use for administrative or analytical purposes is impaired and possibly misleading.

The authors of this volume have in common the purpose of helping to build a standard system of national economic accounts as a basis for international economic comparisons with maximum meaning and usefulness. Some of the contributors are concerned with various elaborations of the basic transactions accounts; others discuss the fundamental concepts underlying the accounts. All would recognize that, at best, comparisons of the national economic accounts can seldom produce wholly unambiguous meanings. Large institutional differences are not fully tractable to reconciliation. The relative size, structure, and movements of the various national aggregates depend inherently on the particular concepts and estimating methodologies employed, even when these are uniform across the board.

Yet most economists wish to see international comparisons made on the basis of reasonably standardized estimates, and they believe that with discriminating interpretation the results will be worthwhile. Continuation of the striking progress toward comparability and improved quality of national accounts that has been made in the last decade should reduce the currency of "dangerous counterfeits of knowledge" in this area, against which Jacob Viner warns in the concluding comment of this volume.

The Development of an International Approach to Economic Accounts

An international approach to economic accounting is still in its childhood, vigorous though the child has become in a short span

of years. It was natural that firm steps toward obtaining comparability of national accounts should await a prior development of this kind of economic statistics within a number of countries, and some demonstrations of their practical usefulness for analysis and policy purposes. Once reasonably good national income estimates became available, the new set of uses in administration and appraisal of cooperative endeavors among nations further accelerated development of national economic accounting as well as the trend toward standard systems.

THE SPREAD OF NATIONAL ECONOMIC ACCOUNTING

The League of Nations Committee on Statistics first took up consideration of international comparability of national income estimates in 1939. This was the same year in which national income estimates of various countries were published for the first time in the annual *World Economic Survey* of the League. Estimates covering all or part of the period 1929-1938 were presented for 26 countries. This number compares with estimates available from about a dozen countries at the beginning of the interwar period, most of which were the work of individual investigators whose ancestry traces back as far as Petty and King in the seventeenth century.[1] The big stimulus to expansion of national income work came with the depression of the 1930's, when the policy needs of governments, combined with a sufficient theoretical and statistical maturity in the field of national income, led to governmental support for continuing estimates. About half of the estimates contained in the League report were newly developed official series.

Further rapid progress was made in the national income field as a result of the pressing informational and administrative needs of the allied powers in World War II, and of the associations of nations growing out of the war. The first United Nations compilation, *National Income Statistics of Various Countries, 1938-1947*, which appeared in 1948, contained estimates for 36 countries. The latest UN statistical paper contains 78 different national series, with considerable structural detail.[2] In many countries, as a result of expanded governmental support, the national income series have grown into complex systems of national economic accounts which

[1] Paul Studenski, *National Income Estimates the World Over—History, Theory, and Practice*, New York University Press, in press.

[2] *Statistics of National Income and Expenditure*, United Nations, Statistical Office, Statistical Papers Series H, No. 7, 1955.

show the interrelationships among the principal sectors of the economy and hold the possibility of further elaboration in a number of directions.

USES OF ECONOMIC ACCOUNTS AT THE INTERNATIONAL LEVEL

Before tracing the efforts to achieve greater comparability of national economic accounts, it is worth pausing to consider some of the uses to which international comparisons may be put. Several of the authors believe that formulation of the accounts should be shaped by their intended uses. Others think that the accounts should contain a maximum of information so that the user may manipulate the estimates to his purposes. In any case, a brief recapitulation of uses points up the importance of international comparison.

One broad category of purposes may be designated as analytical. Study of the comparative morphology of national economic development and the association of differences in growth patterns with differences in related factors can yield important insights into historical economic dynamics. When the differences in economic performance of nations are related to differences in institutions and social and economic policy, the appraisals take on a distinct political overtone—Kuznets would call this a separate type of use of the estimates. The comparative method, whether employed academically or for political appraisals, has been used ever since the mercantilist period, but early writers were handicapped by lack of data. Even a Colin Clark or a Simon Kuznets must devote much effort to piecing together facts before trying to glean meaning from international comparisons. But the rapidly accumulating international economic intelligence and the efforts to establish comparability should lead to important progress in years to come. The analytical results may well have significant policy implications both for the development of economically backward areas and for the promotion of stable growth in the industrialized nations.

Despite the importance of the purely scientific approach to international comparison, the more effective stimulus to spread of national economic accounting and standardization of method has been the practical administrative and policy needs of international organizations. This second broad category of purposes can best be summarized in terms of some of the actual uses to which the economic accounts have been put by international agencies since 1939.[3] Al-

[3] Cf. Richard Stone and Kurt Hansen, "Inter-Country Comparisons of

though the usefulness of national accounts had been perceived in earlier international undertakings, the progress of economic accounting was still too insubstantial to permit administrative use.[4]

During World War II, gross national expenditure and national security outlay estimates were developed in order to indicate the relative impact of the war programs on the resources of various countries. In the postwar period, funds for relief, rehabilitation, and development have been apportioned by the agencies in these fields with some reference to conditions revealed by national accounts. Relative national income has been one factor used in determining the relative magnitude of defense expenditures of the various nations in the North Atlantic Treaty Organization. The assessment of contributions of member nations to the United Nations,[5] and half a dozen other international organizations, is based on national income estimates. Projects for even closer integration of several economies, notably the European Coal-Steel Community, benefit from comparable national accounts. Further, the national accounts estimates are the main tool for appraising the results of international economic programs. As the accuracy and comparability of national accounts continue to improve, still greater reliance may be placed on them by international agencies.

PROGRESS TOWARD INTERNATIONAL COMPARABILITY

When the League of Nations Committee on Statistics first undertook a review of the comparability of national income estimates in 1939, it was faced with a considerable divergence of underlying concept and methodology.[6] Economic accounts inevitably mirrored the particular institutions and stages of development of the economy and of economic thought and statistics in each country. Despite

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the National Accounts and the Work of the National Accounts Research Unit of the O.E.E.C.," *Income and Wealth*, Cambridge, Eng., Bowes and Bowes, Series III, 1953.

[4] For example, in 1924 the Dawes plan discussants at one point contemplated tying German reparations into German national income, but this idea was abandoned because of the unreliability of the estimates. Instead, a fantastic hodgepodge of available statistical indicators was used. See Arthur Smithies, "National Income as a Determinant of International Policy," *Studies in Income and Wealth, Volume Eight*, National Bureau of Economic Research, 1946.

[5] See *Report of the Committee on Contributions*, United Nations, Official Records, 9th sess., Supplement No. 10 (A/2716), 1954.

[6] The development of economic accounts in each of the several nations is traced in some detail by Studenski, *op. cit.*

incomparabilities, there were still important areas of consistency among the various national accounts. This was due to the fact that the estimates were first made chiefly in the more highly developed countries among which institutional divergencies were not so great, and whose national income specialists were at least loosely in touch through the learned societies and their journals.

In the opening paper of this volume, Morris Copeland traces the steps taken on an intergovernmental level, beginning in 1939, to set up uniform concepts and methodology for the various national accounts. It is unnecessary to repeat this story, other than to refer to the culmination of progress up to this point—the UN document, *A System of National Accounts and Supporting Tables.*[7] The reader of this volume will find it helpful to have a copy of the UN report at hand for reference purposes, since it is the point of departure for several of the discussions contained here.

Nongovernmental discussions of the problems of international standards and comparability have contributed to the international documents, and it is hoped, will continue to do so. Thus many of the papers in Volumes Eight and Ten of *Studies in Income and Wealth* were devoted in whole or in part to this subject. Many of the papers contributed to meetings of the International Association for Research in Income and Wealth, established in 1947, have quite naturally been concerned with international comparison. On a somewhat different level, the trainee program of the National Income Division of the Department of Commerce has been an important force in widening the number of countries preparing income estimates and in promoting informally greater uniformity of concepts and method.

What has been accomplished toward actually adjusting the accounts of various countries for comparability? The Statistical Office of the UN which has been publishing national income estimates regularly since 1952 for as many countries as possible in its H series of papers, uses a standard form of presentation and adjusts the national estimates for comparability when this may readily be done from published sources. The major remaining incomparabilities are generally indicated in notes to the tables. The constant price series likewise contain incomparabilities, evident in the fact that

[7] *A System of National Accounts and Supporting Tables*, United Nations, Statistical Office, Studies in Methods Series F, No. 2, 1953. A report prepared by a group of national income experts appointed by the Secretary-General.

different price weight bases are used, and conversion to dollars is simply by means of exchange rates—a procedure that may produce serious distortions, as brought out in several of the papers in this volume. Recently, however, the Statistical Office has been directed to collect current value estimates according to the standard system where feasible, and it is anticipated that a comparable compilation for about 40 countries will be forthcoming.[8]

Meanwhile, shortly before the National Bureau Conference was held, the Organization for European Economic Cooperation published the most closely comparable set of national estimates yet to appear, covering 15 of the 18 participating countries plus the United States and Canada.[9] Gaps were filled in by the National Accounts Division, and estimates presented for the OEEC countries as a whole and for the smaller European Coal-Steel Community. The fact that the standard system employed by the OEEC is very similar to the UN system facilitates integration of the OEEC estimates into the UN compilations. The OEEC study is a prototype of what may eventually be possible for the world as a whole if efforts toward promoting national accounts estimates and a standard system of accounts continue.

To avoid a misunderstanding that appeared during the discussions at the 1954 conference, it should be made clear that the UN standard system is not a strait jacket within which to contain the development of national accounting. It was designed to provide guidance for neophyte countries instituting economic accounts, and as a frame within which national estimates might be adjusted for purposes of comparisons, preferably by the statistical offices of the various nations themselves. It is stated in the preface: ". . . the report is circulated for further comments and information on the experience obtained by countries in applying the concepts and classifications proposed, so as to provide a basis for further recommendations relating to international standards in this field." Certainly, the experience gained by many countries not only in applying the standard concepts, but also in experimenting with new conceptions and elaborations, will provide a rich basis for future revisions of the international system. Account will also be taken of continuing dis-

[8] The editor is indebted for this information and other friendly assistance to J. B. D. Derksen, Chief of the National Accounts Branch of the Statistical Office until March 1956.

[9] *Statistics of National Product and Expenditure, 1938, 1947 to 1952*, Paris, OEEC, 1954.

cussions of the problem areas, to which the papers sponsored by this Conference are an important contribution.

Major Topics Treated by the Contributors

The remainder of this introduction will be devoted to indicating briefly the chief matters treated by the various authors and discussants and to conveying a little of the flavor of the contents. It is hoped that the introductory *hors d'oeuvres* will not be so substantial as to reduce the reader's appetite for the *pièces de résistance* that follow. But the papers are so diverse and frequently complex that something in the way of a summary may prove a useful guide, especially to the reader who wishes to pick and choose.

The papers fall roughly into two categories. Morris A. Copeland, Herbert B. Woolley, Dorothy S. Brady, and Abner Hurwitz devote most of their attention to the "periphery" of the basic transactions accounts of the UN system. That is, they consider problems involved in elaborations in the direction of input-output analysis, moneyflows and balance sheet statements, a world matrix of international trade relations, and comparisons of the relative purchasing power of currencies required for interspatial product comparisons or consolidations. The papers by Irving B. Kravis, Gerhard Colm, and Marilyn Young are devoted to theoretical and conceptual problems concerning the delimitation of economic activity generally, and the treatment of government in particular—problems that have been ever-controversial in the development of national economic accounting, but which assume new dimensions when international comparability is sought.

INPUT-OUTPUT, MONEYFLOWS, AND BALANCE SHEET ELABORATIONS

The opening paper by Copeland is the most comprehensive of the collection. While his chief concern is with peripheral elaborations of the UN system, he also discusses problems posed by institutional differences. He is reasonably well satisfied with the UN imputations, as opposed to Kravis, who would further expand the imputations for nonmarket activity in order to achieve a greater degree of invariance to institutional differences. Copeland examines the role of the "rural sector" in the accounts and proposes further simplifications of the UN system in order better to accommodate statistically underdeveloped countries. As Richard Ruggles points out in his comments, the various Copeland proposals are partic-

ularly constructive, since they use the UN standard system of national accounts as a point of departure.

Copeland says that we have something like a consensus today with regard to the standard system of transactions accounts. But he urges that, before we crystallize international conventions too far with respect to this "core," we examine the extensive, unsystematized social accounting periphery. This examination results in a "feedback" of suggestions for modifying the basic transactions accounts.

The interindustry elaboration Copeland visualizes as an expanded UN Table II (gross domestic product by industrial origin). It is based on an establishment sectoring of the economy appropriate to input-output analysis as contrasted with the ownership sectoring required for moneyflows and balance sheet analysis. While the interindustry and moneyflows elaborations are each tied into the standard set of transactions accounts, they are not reconciled with one another. George Jaszi, one of the group of five experts who drafted the UN document, believes Copeland's solution is the only possible one in this regard.[10]

The moneyflows elaboration, while susceptible to synthesis with national income and product accounting, presents difficulties. Copeland suggests various changes in the UN accounts designed to isolate distinct transactors and to eliminate "shiftiness in sector definition" which obscures decision-making processes. His Exhibit 3 is a tentative amendment of the UN system of transactions accounts, designed to accommodate the moneyflows elaboration as well as to incorporate other of his proposed modifications. He also outlines the contents of several supplementary moneyflows tables. Once the UN system is adapted to a possible moneyflows elaboration, Copeland maintains that the problem of articulating a summary system of interlocking balance sheets with the central system of interlocking transaction accounts "will automatically have been solved." His Exhibit 4 represents a highly tentative set of interlocking balance sheets.

Wassily Leontief's comments are directed chiefly toward the general methodological basis of Copeland's recommendations. He poses the question as to whether a set of accounts is "a receptacle

[10] See Volume Eighteen of this series, *Input-Output Analysis: An Appraisal* (Princeton University Press for National Bureau of Economic Research, 1955), for other discussions of the relationship between input-output, moneyflows, and national income.

of generally useful primary quantitative information" or whether it is an "analytical device." While Copeland would take the latter position, Leontief would like to have seen further explanation of his theoretical principles and analytical applications. Jaszi, while disagreeing with several of Copeland's proposals, regards the paper as "a basic document" in the field.

DEFLATION OF NATIONAL PRODUCT AND THE EQUATING OF CURRENCIES

Copeland excluded consideration of the elaboration of national produce accounts in terms of constant prices, and the further problem of comparison of the purchasing power of the various national currencies necessary to a consolidation of national accounts. With regard to the first problem, the mechanics of presentation would be straightforward. The various types of final product would be deflated in as fine a detail as possible, and the constant price estimates presented as further elaborations of the tables showing type of product breakdown (Tables I, VI, VIII, XA, and XI of the UN system). If data permitted, real gross and net product originating in the various industries over time could be shown in connection with the input-output elaboration of Table II. International agreement should be secured as to the weighting system, so that comparison of changes over time in real product aggregates, components, and variants among nations would be relatively consistent in this regard.

The problem of converting the national accounts of different countries to a standard set of valuations involves different and possibly more difficult problems. The main paper devoted to these problems is that by Brady and Hurwitz, but some of the other contributors get into edges of the field.

Jacob Viner, for example, points out that whereas prevailing or official exchange rates have been used in some well-known studies, this method produces grossly arbitrary results. "Given the present instability of exchange rates, the prevalence of exchange controls, the existence of multiple exchange rates, this is a peculiarly inappropriate time for following a method which under the best of circumstances is insusceptible of a logical defense, regardless of the purpose of the comparison."

In an important section of his comments, Everett E. Hagen adduces reasons why exchange rates tend systematically to undervalue the output of countries with lower per capita income relative to the higher per capita income countries—a result demonstrated

in the recent study by Gilbert and Kravis.[11] Hagen generalizes further the evidence presented by the OEEC study to the effect that the undervaluation of per capita real income by use of exchange rates increases as relative per capita income declines.

This phenomenon at least partly solves the riddle which Kuznets posed some years ago that if per capita income of the least advanced countries of the world were as low as exchange rate conversions indicated, the populations would literally have died of starvation. Use of direct price comparisons as well as adjustment for greater comparability of coverage of the national income estimates go far toward producing more plausible real income relationships.

Hagen also considers the problem created by a greater or lesser lack of identity between the goods consumed in the various countries—a problem that Leontief warns against burying in broad product classifications. Hagen argues for an interspatial chain index as the most practical expedient in this area.

Drawing on a wealth of experience in their price work in the United States Department of Labor, Brady and Hurwitz offer many important observations and suggestions for measuring the comparative purchasing power of national currencies. They first discuss operational problems involved in matching and grouping commodities. They imply that a real danger lies in deflating national accounts in terms of the existing final product classifications. They suggest that price samples drawn to represent other types of product groupings, as by production process, could reduce the bias in the index numbers. Further analysis of the influence of the classification scheme on the sampling operation is called for.

The most intriguing part of the Brady-Hurwitz paper lies in the suggestions for finding purchasing-power equivalents based on household budget data without the need for price observations at all. Equivalence of real consumption is identified by similarities of consumption patterns at specified income levels as indicated by equal proportions of income spent on food, or on necessities generally. This identification makes possible a single determination of the relative purchasing power of currencies with reference both to the particular class of consumption goods and to total consumption expenditures. The method is described as "the converse of deflating."

[11] Milton Gilbert and Irving B. Kravis, *An International Comparison of National Products and the Purchasing Power of Currencies*, Paris, OEEC, 1954.

James Tobin and Donald C. MacGregor, in their penetrating comments, question the rationale underlying this approach and expand on a number of doubts about the principle and its practical application. Nevertheless, the method will be of great interest as a possible means of approximating relative purchasing powers of the currencies of those countries possessing little general information on prices and quantities.

A World Trade Matrix. Whereas the elaborations discussed by Copeland push out the periphery of the individual national economic accounts, the world trade and payments matrix discussed by Woolley may be viewed as an elaboration of Copeland's vision of an interlocking set of economic accounts for the nations of the world. Furthermore, Woolley's discussion is not purely theoretical but is buttressed by his empirical work showing international trade relations on a from-whom-to-whom basis for the year 1951. In this case, the child has been born before the parent! Although the field of international trade and financial statistics was only recently "an almost unexplored statistical jungle," according to Walter S. Salant, work by the international agencies—particularly the International Monetary Fund—has made possible Woolley's continuing attempts to piece together an orderly picture of world-wide economic relationships.

As Woolley puts it: "We need an organized and consistent record which can be used as the basis for weighing the consequences on every part of the world's economy of alternative policies and programs of governments. . . ." Particular problems he believes the world trade matrix will illumine are the effect of economic development on world trade structure, the impact of business cycles, and balance of payment problems. Salant suggests that there may be a trace of Western bias in the choice of problems the matrix is designed to help answer, and that other questions might require a somewhat different design. It might also be observed that the analysis of international economic problems will be facilitated by coordination and eventual consolidation of the basic national economic accounts, so that international economic relations can be studied in the broader framework.

As Woolley visualizes it, the matrix should show the current and capital transactions, with broad subdivisions, among significant groupings of nations. He discusses the requisites of such a system in terms of the geographical, currency, item, and time dimensions, and points out how the matrix is coordinate with the UN system of

national accounts, and a few ways in which deviations from UN definitions may be necessary. Woolley's conscious policy bias leads him to attempt to secure greater comparability among the international sector accounts of different countries even at the expense of the comparability of the international sector with other sectors in particular national accounting systems.

Against the background of a "trial-run" matrix of merchandise and transportation transactions in 1951, prepared for the National Bureau, Woolley discusses some of the practical difficulties involved in implementing his ideal requirements. The "two-valued" audit feature of the matrix proves valuable in assessing the results of the trial run and in helping identify the sources of statistical difficulties. Woolley points particularly to the lack of information on petroleum transactions, the divergent accounting treatment of shipping transactions carried on by certain flag vessels, and improvements needed in reporting of merchanting transactions. The National Bureau is making special studies of these areas. In his comments, Sam Van Hyning admits the need of improved reporting in these areas but believes that other problems of the merchandise accounts will prove to be more important. Woolley thinks that the problem of divergent timing in reporting of exports and imports probably accounts for much of the 2.2 per cent net divergence between reported payments and receipts for merchandise in 1951.

Apart from its eventual usefulness for analysis, the matrix work, insofar as it stimulates improved and consistent reporting procedures among nations, will contribute to the comparability and accuracy of the foreign sectors of the various national accounts as well as permit more precise international elaborations. Van Hyning, however, is willing to sacrifice some of the special studies of petroleum transactions, etc., in order to push on with matrixes for years other than 1951 as a basis for analyses of the changing structure of trade and payments. This contention must be left unresolved, however, since there can be no absolute criteria for allocation of research funds among competing projects.

The Government Sector Again. Colm re-examines some of the controversial issues in the government sector with the objective of arriving at formulations that will be most appropriate for international as well as intertemporal comparison. The ensuing lively discussion indicates that the problems in this area are still controversial among economists in this country as well as internationally.

One encouraging feature of the Colm paper is the evidence that

national income experts sometimes change their positions. Colm, who had formerly favored segregating government output between final and intermediate products, now feels that this procedure, while theoretically desirable, would introduce more errors into the national product estimates than are present under the current United States and UN practice of counting all government purchases as final output. Solomon Fabricant is unwilling to give up on the question: he calls for further grappling with the figures in attempts at allocation, although not necessarily on the basis of criteria outlined by Kuznets.

The role of statistical feasibility in shaping definitions of the accounts comes up again in connection with the services of government capital. Colm, more sanguine than in the case of governmental cost services, suggests that "the time may have come" when reasonably reliable direct estimates of government capital services can be made. Jaszi raises several theoretical objections but seems to base his opposition to the Colm suggestion mainly on the "difficulties of establishing proper capital values and interest rates applicable to them." Here again Fabricant opposes the sacrifice of principle to statistical expediency and, indeed, claims that "the time has already come" when the estimates are feasible, based on wealth estimates of Reeve, Goldsmith, and others.

While Colm would include all government purchases in national product, he does not justify the inclusion by classing the government as a "consumer," as would Richard Stone and the UN experts. Jaszi, in objecting to the "producer" view of government, makes out an interesting case that logical consistency would also require households to be treated as producers, and that everyone who deals with the government controversy should at the same time address himself to the consumer analogy. While Jaszi believes that Colm's recommendations for deflating government purchases are inconsistent with the producer view, Colm's suggested adjustment of general government factor input for productivity changes may be viewed as implying the producer approach. Jaszi seems to be on firm ground in maintaining that for cross-sectional analysis of the accounts, price deflation is not appropriate.

We shall have to pass over several other interesting points in the government discussions and draw attention to the area to which Colm devotes most space. This is the problem of devising accounting ways and means of showing total government receipts and expenditures (including transfer payments) without double count-

ing.[12] This is important for purposes of comparing the economic structure of various countries in terms of the government impact on demand. Jaszi, however, feels that the aim of showing the relative importance of government through any simple statement "is a will-o'-the-wisp, given the complexities of the actual world." Colm feels that the indirect influence of government exercised by loans, loan guarantees, and other devices might be shown in auxiliary tables.

Marilyn Young originally planned to prepare an appendix to the Colm paper, explaining the differences among the three chief federal budget statements: the conventional, cash, and the economic accounting budgets. Faced with the complexities of the reconciliation, Miss Young permitted her paper to grow to independent stature. A most useful contribution it is, for both the technicians in this country and those abroad who are faced with the problem of reclassifying conventional budget statements in terms of economic impact suitable for integration in the national accounts. For the general economist, too, who would like to sharpen his often hazy notions of this area, Miss Young's discussion and tables showing all the reconciliation items will be enlightening.

Henry S. Bloch and Alfred Landau of the UN provide a useful supplement to the two major discussions of the government sector by reviewing recent practices in budget classification in various countries. Their comments start with the Scandinavian countries, which have pioneered in economic character classification, and end with several countries which have only recently made a start toward reclassifying conventional budgets into the form of economic accounting statements. Some of the procedures used in other countries help to illuminate the controversies noted earlier. For example, with regard to the services of government capital, it is pertinent to refer to the Danish system of central government accounts "where commercial accounting principles have been generally applied and where current transactions are debited not only with depreciation of government-owned assets, which are defined there in very broad terms, but also with imputation of interest." This certainly makes it easier for the social accountants. As Colm said with regard to capital budgeting, "real progress requires the effort not only of workers in national economic accounting but also of budget experts."

[12] See Colm's Table 1.

Jaszi is willing to look a stage further ahead than Colm and Miss Young regarding alternative budget statements. While he admits the value of clear reconciliations of conventional and economic budgets he considers it "entirely possible to work out a single statement that would serve governmental as well as national accounting needs." Colm is encouraged by this statement from Jaszi; Bloch and Landau imply that conventional budget work which is shaped by the exigencies of fiscal policy requirements, while providing the components for economic accounts, "cannot go all the way."

AN ALL-PURPOSE CONCEPT OF ECONOMIC ACTIVITY

In a paper made rather more interesting than the usual economic discussion by generous allusion to anthropological materials, Irving B. Kravis attempts "to find a concept of economic activity that will be useful in comparing national incomes in two situations distinguished by widely different social and economic institutions." He finds that it is not adequate to base national income estimates on a common range of products, seeking out the nonmarket products in pre-industrial societies that have market analogues in advanced economies, since there is also an impressive list of nonmarket activities in the advanced countries. The weakness of the UN report in this respect Kravis pinpoints as "its attempt to draw a production boundary for the underdeveloped countries without first finding a rationale regarding the nature of economic activity in a premarket economy."

Kravis then proceeds to develop two major rules for identifying economic activity: the rule of remunerated activities, by which the existence of a *quid pro quo*, whether mediated by the market or not, signifies the economic nature of an activity; and the rule of sensitivity to rewards, which is based on the notion that the noneconomic play and ritual of life are entered into for their own sakes and are insensitive to economic motivations. While Kravis recognizes that his rules may sometimes provide ambiguous guides to measurement, he believes them generally adequate for determining the content of national income in different societies. He rejects the thesis of Herbert Frankel that cultural divergencies are too great to permit meaningful income comparisons. He emphasizes rather the similarities among societies in the nature of man, the fact of scarcity, and the general importance of material considerations. In any case, we may be comforted by the gradual "cultural convergence" taking place in the modern world and by his statement that "...although

the values and objectives implicit in Western national income accounting may not be indigenous to the underdeveloped areas, they are those to which the underdeveloped countries, or at least their leaders, aspire."

Both Hagen and Viner, in their comments, join in criticizing Kravis's rule of sensitivity to rewards. Hagen finds that the difficulties in dividing economic from noneconomic activities arise from the fact that "the division is conceptually improper," since the two classes are not mutually exclusive; Viner states that for a wide range of activities, work and play are "hopelessly mixed up." They both believe that leisure in the aggregate and particular leisure-time activities are "sensitive to the marginal reward for increased production," as Hagen puts it. Kravis replies that it is the *degree* of sensitivity that may be used to single out the primarily economic activities. Hagen nevertheless maintains that a conceptually sharp delimitation of economic activity is impossible, and that only "empirical" rules can be employed by the estimator of national income. Viner, stressing that estimates must be shaped with regard to specific purposes, suggests that the national accounts for the various countries be made as comprehensive and detailed as possible. In this way, the user of the estimates can shape them to his own particular uses. This also seems to be the general methodological predilection of Leontief.

In closing, Viner warns against "promiscuous" use of international comparisons. His procedural suggestion as to detailed accounts would, he believes, somewhat lessen this danger, although there can be no guarantee against the misuse of even the best of estimates.