Review of Income and Wealth
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BEYOND THE SNA—WHITHER?

A Review of R. E. Baldwin, R. E. Lipsey, and J. D. Richardson (eds.), *Geography and Ownership as Bases for Economic Accounting*, University of Chicago Press, Chicago and London, 1998 and
S. J. Keuning, *Accounting for Economic Development and Social Change*, IOS Press, Amsterdam, Oxford, Tokyo, Washington DC, 1996.

With the assignment to review these books came a clear and well-formulated task: When we think of the SNA, and its revisions to cope with an ever-changing world, there is a natural tendency to start from the present conceptualization, and implement marginal adaptations. Larger types of changes ought also to be thought about, however. Here are two books that talk about such issues. Was I interested? Of course I was, and eager to learn where the discipline of national accounting is to go after it has achieved and completed the System of National Accounts (SNA). Having read through the books, the view is clear, but rather sober. It seems the SNA is less a matter of "citius, fortius, altius," of continual improvement than of "to be or not to be." It is there, in its unique and persevering guise resisting any but marginal changes as long as there is a capitalist economy underlying, equally robust in its essential structure. We may transcend it, and these two books are impressive examples of such endeavours, but we cannot leave it. We always fall back on it, and there is no alternative. If there are larger changes to be thought about, these must occur in the economy itself first.

This is so in spite of the fact that these two studies, standing at opposite corners of the field, clearly demonstrate the limits of the SNA. Baldwin, Lipsey, and Richardson compile a volume rich in empirical economic data that fall outside the traditional accounts although they are of high political and economic relevance. Keuning produces a grand design showing what needs to be done in order to achieve a truly integrated monitoring system of economic and social development, pointing out the theoretical deficiencies of the SNA in this respect. Still, these exercises work like analytical eclipses. If you ignore the central star for a while by placing a moon between you and it, you see not what might alter or replace the sun, but what accompanies it. Both books have been written in this daring spirit. They navigate in the corona of the SNA.

Beginning with the data side we take up "Geography and Ownership as Bases for Economic Accounting" first. The title is a misfit, as we shall see. The content centers about international production, its data and its analysis. The book contains revised versions of papers presented at a Conference on Research in Income and Wealth held in Washington, DC, in 1995, now appearing as volume 59 of the NBER Studies in Income and Wealth. All of the papers are empirically oriented. They provide data, define measures of competitiveness or of welfare, look at market shares and shares of value added. Together they form "a commendably rich array of data for readers to examine," as one of the commentators put it (Hummels). The geographical focus is twofold: the United States, understandably, on the one hand, and the Far East, on the other. Still the conclusions reached are easy to generalize—such as: "Given all the attention that globalization has received from scholars, international organizations, and the press, these numbers are a reminder of how large a proportion of economic activity is confined to single geographic locations and home-country ownership. Internationalization is clearly growing in importance, but the vast majority of production is still carried out by national producers within their own borders." (Lipsey, Blomström, and Ramstetter.) Each of the ten papers is accompanied by a commentary, which renders a review of the total volume both easy (because the thinking has already been done) and difficult (because the diversity of viewpoints expressed is astonishing and hard to synthesize). I will pick four studies as representing the total volume, discussing them in some detail, and summarizing the rest, in the hope that these four may serve as the bait for the others.

A central paper is "Comparing Wages, Skills, and Productivity between Domestically and Foreign-owned Manufacturing Establishments in the United States," written by M. E. Doms and J. B. Jensen. Following the surge in foreign direct investment observed in the past decade, public interest has focused on the impact of such investment on the host economy—in particular, the nature of employment provided by foreign plants, and their comparison to domestic plants in terms of wages and productivity. The book's actual, and interesting, topic is foreign direct investment, which is at issue all over the world.

Doms and Jensen ask whether or not production establishments owned by foreigners differ from the ones owned by domestic residents, and if so why and in what ways. The question is of political importance, because the distinction between national and foreign is political, by nature. It is also of economic relevance, because one would like to know in what way a non-economic variable, such as the distinction between national and foreign capital explains economic performance. All these issues are addressed and neatly decomposed in this fine and forceful paper.

Doms and Jensen make use of several establishment-level data sets available for the U.S. in the year 1987, comprising some 115,000 observations. The disaggregation to plant level is advantageous because heterogeneity across establishments within industries is substantial. In fact, within-industry variance in wages and productivity exceeds inter-industry variance. There is considerable sample attrition, though, in terms of the number of establishments and, to a lesser degree, in terms of manufacturing employment due to incomplete records. Still, the sample allows the authors to control for industry, plant size, plant age, and location in testing for differences in the operating characteristics between foreign and domestic plants.

What is a foreign plant? The theoretical discussion of the issue is cut short by the given data set, as usual. The Foreign Direct Investment Survey states "a U.S. affiliate is a U.S business enterprise that is owned 10 percent or more, directly or indirectly, by a foreign person." Comparing 4,463 such establishments to 110,676 domestic establishments in the manufacturing sector, Doms and Jensen find an average employment of 192 persons per establishment for the first and 105 for the latter. They also find that foreign-owned plants are more productive, rely relatively more on capital and pay higher wages than domestically owned plants, although when U.S. multinationals are singled out from the domestic sample, these outperform the foreign plants.

The sample is divided into four categories, foreign-owned plants, small domestically owned plants, large domestically owned plants (employment of 500 being the line of distinction) and U.S. multinational owned plants. Regressions controlling for establishment size, four-digit industry, plant age and state show that plants of U.S. multinationals pay the highest wages both to production and non-production workers. Production workers are paid 2.9 percent less at foreign-owned plants, 6.9 percent less at large domestically owned plants and 15.2 percent less at small domestically owned plants relative to workers in U.S. multinationals. The same ranking holds for capital intensity and labour productivity. Plants owned by U.S. multinationals show a 6.2 percent higher capital–labour ratio and 8.2 percent higher labour productivity than foreign-owned plants.

The difference is statistically significant, but one should not take it too seriously. Doms and Jensen are right in drawing the line of distinction not between U.S. and foreign multinationals, but between all multinationals, on the one hand, and the rest of the domestic economy, on the other. "These results suggest that plants of multinationals, whether U.S or foreign, are the most alike and possess superior operating characteristics. They are the most productive, are the most capital intensive, and pay the highest wages. This finding is consistent with the notion that multinationals possess firm-specific advantages, whether superior product design, greater production efficiency, or advanced marketing skill, that enable them to overcome the barriers to FDI." The last sentence is debatable as interpretation, but the factual conclusion of multinational characteristics has been well established. The commentator (Keith Head) puts it bluntly: Most of the premiums in productivity and wages can be explained by observable differences in the attributes of the plants, rather than in the form of a pure "ownership" effect. Furthermore, the unexplained part of the premium does not appear to derive from their "foreignness."

"Measuring U.S. International Goods and Services Transactions," by R. E. Baldwin and F. Kimura, pushes a message: the present system of accounting is insufficient and could be improved by supplementing the geographic approach of the balance of payments and the national accounts with an accounting system based on ownership. Net sales of foreign affiliates of U.S. firms and net sales to U.S. affiliates of foreign firms can then provide a better measure of competitiveness in the globalization of world production than the traditional trade balances.

In a way, this is the message of the whole book, at least as intended by the editors. However it is not totally convincing. While the general thrust of supplementary information to residency accounting is reasonable, the specific use to which the information is applied in the paper is questionable. Stevens seems right when he concludes that "we should not base our calls for a better integration of balance-of-payment and multinational firm data on searches for the best, or even better, measures of competitiveness."

If net sales are a measure of competitiveness (a common interpretation of balance of payment data, and the trade balance in particular), then Baldwin and

Kimura are certainly right in arguing that official figures about cross-border trade are meaningless, because a large proportion of it is trade within the same firm, which does not even require currency conversion, much less marketing activity. In 1992, for example, U.S. balance-of-payment exports amounted to 620 billion dollars, of which 248 billion dollars or 40 percent were shipments between establishments of the same firm, (roughly equally divided between foreign and U.S multinationals). This leaves a sales volume of interfirm or market nature of 372 billion dollars. Even worse proportions hold for U.S. imports. Out of 660 billion dollars recorded in the balance of payments only 54 percent represent true market flows, the rest consisting of intra-firm deliveries. Subtracting the true interfirm imports from interfirm exports yields "Net cross-border sales by Americans to foreigners" equal to 13 billion dollars, one of the competitiveness indicators the authors aim at.

In all its briefness the example shows both aspects of the approach in general. It clearly invalidates aggregate balance-of-payments exports and imports as a useful basis for investigation of international trade, if by trade we mean exchange and competition between firms. This is the positive and convincing aspect of the study. On the other hand, the remedy proposed (compiling a new trade balance) worsens rather than improves the situation. Being a small residual of a large balance it shares the typical weakness of such figures in terms of reliability. The figure runs −69, −48, −28, −10, 24, 13 from 1987 to 1992, which is less than 5 percent of the total amount of cross-border transactions. It is hard to believe that this residual shows more than the sum of errors contained in its parent balances (be it only in terms of the operative definition of "foreignness"). It must be admitted, of course, that the criticism pertains to the traditional balance of payment residual in a similar, although less acute way.

In developing their approach, Baldwin and Kimura look beyond the country border into the host country to find out what sales have been made there by foreigners. Combining this with sales made by the country's enterprises abroad, they arrive at a new balance "net sales by Americans to foreigners." Not satisfied with the balance of transactions Baldwin and Kimura venture further into value added analysis where, on the basis of input–output methodology, they balance the value added of foreign affiliates in a country against the value added to production by that country's affiliates in the rest of the world.

This leads to the final and ultimate aim of the paper, the call for a new way of accounting that gave the whole book its name. In the editors' words: "One of the main purposes of this volume is to raise the question of the degree to which changes in the world economy may have increased the usefulness of international accounts drawn up on an ownership basis relative to those on a geographic basis." It is a small matter, but since it determines the title of the book it is important. The terms as well as the juxtaposition are inappropriate. Firstly, all national accounts, including the balance of payment are drawn up on an ownership basis. Their very element, the transaction of value (creation of claim and liability) is defined between owners of property, called institutional units. What Baldwin and Kimura actually aim at is the distinction between foreign owners and national owners, and while not commonly incorporated in actual balance-of-payment publications, this distinction is definitely provided for conceptually, and easy to fit in the system (SNA para. 4.76). Secondly, the SNA and traditional accounts are not based on geography. The SNA reads: "The economic territory of a country consists of the geographic territory administered by a government within which persons, good and capital circulate freely" (para. 14.9). Thus it is the rule of a certain, national system of law (including a national rule of currency) that constitutes an economy, where the territory provides the means of defining the range of that law, but is irrelevant as an independent category. Hence, the juxtaposition of ownership vs. geography is meaningless, and arises from a lack of precision in terminology. Instead, a detailing of traditional accounts is called for, namely, a distinction between foreign and domestic owners of capital, which is reasonable especially in observing the impact of international production. To put it pointedly, when you apply ownership and geography as the bases of economic accounting you arrive at the distinction between "domestic" and "national" concepts—both of which are contained and integrated in the SNA. Baldwin and Kimura, although quoting the founding fathers of national acounts discussing this conflict (Kuznets, Stone), ignore their teaching.

The third paper to be discussed is "International Production in World Output" by R. E. Lipsey, M. Blomström, and E. D. Ramstetter. The paper is interesting because it makes a significant addition to the wealth of data collected in the whole volume, and because it dwells on the theoretical substance of the ownership and geography distinction. The authors underpin their already quoted finding that in spite of the much talked about globalization, the major part of world production is still domestic. Even U.S. multinationals locate three quarters of their activity at home, and for Japanese multinationals the figure is 84 percent. On the other hand, "a very rough calculation suggests that multinationals accounted for about 22 percent of world output at the beginning and end of the 1980s." Again we find it is not foreignness, but multinationality of production that features globalization.

Although one can look at international production either from the view of the home country of a corporation or from the host country, reality is not symmetrical—there are only a few countries serving as a base for multinational corporations whilst host countries are practically the whole world. The U.S. nonbank multinational share in world GDP amounted to 9.15 percent in 1977, before the surge in FDI began, and fell to 7.16 percent in 1989, after it had occurred. For Japan the figure was 2.6 percent in 1980 and 3.6 percent in 1992, while for Germany it was 1.1 percent in 1976 and 2.3 percent in 1993. Viewed from the host country's side, the share of foreign firms in U.S. GDP grew from 1.6 percent in 1974 to 4.6 percent in 1993 and although in Japan the estimate is more uncertain depending on the specific ownership criterion applied, the highest figure is 6 percent in 1992. Developing countries time series are provided for India, Korea, Malaysia, Taiwan, China, Hong Kong, Indonesia, Singapore, and Thailand, although in many cases data availability limits the comparison. On the whole it is a comprehensive set of data that helps to put the debate about international production into perspective.

However, Lipsey, Blomström, and Ramstetter begin with an interesting statement: "Internationalized production, that is, the operations of multinational firms outside their home countries, represents a separation between the geographical location of production and the ownership of production." This is certainly not true. In SNA terms, one can distinguish the residence of an establishment from the residence of its owner. The first is the basis for compiling gross domestic product and value added, while the residence of the owner of the establishment or the workers in it is the basis for compiling gross national product and national income. When in addition to the residence you distinguish the nationality of the owner you mean the residence of the headquarters of a company. So what is separated by the economic boundary is the plant and its headquarters. It should be mentioned that in contrast to their predecessors Lipsey, Blomström, and Ramstetter do not call for a new base of the balance of payment or national accounting systems.[1]

The fourth paper is selected here because it touches on a new subject: "The Effect of U.S. State Tax and Investment Promotion Policy on the Distribution of Inward Direct Investment" by D. L. Swenson. Foreign investment creates employment, and it may provide other advantages such as knowledge spillovers to host locations, so during the 1980s U.S. state governments intensified their efforts to capture a larger fraction of these new investments. Swenson asks how successful states were especially regarding their tax and promotion policies geared to attract foreign investment. The study uses employment data from the Commerce Department benchmark survey of foreign investment conducted in 1980 and 1992, and in addition the annual survey of 1987 to capture a possible lag of response. During that period foreign employment in the U.S. increased from 2 to 5 percent of total employment (with great variations, however, between states).

The responsiveness of foreign investment to tax policy is investigated by means of a regression of employment changes on variables that differ by region, such as population, value added, wage, corporate tax, job credit programs, foreign investment offices. The results are "roughly consistent," as the commentator Michael Wasylenko wryly notes, with the results reported in other papers. Both the interregional and the intra-regional distribution of foreign employment in manufacturing appear to respond to tax differences in the expected way. In contrast, the distribution of non-manufacturing activity does not show this tax sensitivity, which is interpreted as a sign that in this case other reasons, such as market proximity determine the choice of location. The regression on other state promotion tools does not produce identifiable effects, which is probably due, as author and commentator point out alike, to the difficulty of defining adequate quantitative measures for such activity.

The other papers also span a wide range of issues. Thus Baldwin and Kimura apply the net sales concept not only to U.S. data as explained before but also to Japan. Low, Ramstetter, and Yeung do an interesting study on the difference between classifying foreign direct investment by country of capital source and by country of ownership, exemplified by the "holding countries," so to speak, of

[1]The authors are also lenient in their terminology regarding use of the word "Output," which in the SNA sense is the sum of sales plus increase in stocks of own products plus own account capital formation. It is not always clear whether the authors use the word in this sense (see, for example the above quote about the weight of multinationals in "world output"). This is particularly irritating when looking for market shares, where sales and not gross product or value added are the significant variables.

Hong Kong and Singapore. Fung does "the dirty job," as the commentator Noland puts it, of ploughing through the accounting morass of China's burgeoning trade. Zeile studies the domestic content of production for foreign-owned affiliates finding interesting differences among the foreign countries investing in the U.S. Mutti and Grubert investigate how rules to determine the source of income for tax purposes can affect the form in which taxable income is reported in the U.S. and where economic activity is located. Last not least, Fisher closes the volume with a chapter on "A Measure of the Current Account Related to the Well-Being of Japan." The enumeration shows the wide scope of issues included in the book, most of which have to do with accounting, and if not, reflect on what can be done by means of accounting. Except for the excessive claim criticized already, the book is a valuable contribution to the literature of international production and a worthy continuation of the NBER series.

If international production does not require a new conceptual base in accounting, what about economic development and social change? Isn't that a phenomenon in our ever-changing world demanding new ways of accounting? Steven Keuning answers this question in his monograph and dissertation "Accounting for Economic Development and Social Change." It is inspiring to compare this study to the Baldwin, Lipsey, and Richardson volume, not only because here we have one author as opposed to many, but also theory as opposed to data, and social, or if you will, labour concerns, as opposed to capital concerns. Keuning designs a "System of Economic and Social Accounting Matrices and Extensions," with the promising acronym SESAME, in order to establish a set of core economic, environmental and social macro-indicators for policy-makers. It is related to the concept of Social Accounting Matrix (SAM), which is proposed in the 1993 SNA, in a chapter written by the same author (Chap. XX).

However, to say that Keuning's study is pure theory would be as unjust as to say that the NBER volume is pure data collection. The emphasis is different. The NBER volume centers around an empirical phenomenon, namely international production, and looks at it from different sides, including problems of accounting, mostly by collecting and analyzing data, as they are available. Keuning also has a particular case in view, which is the economy of Indonesia during the years of the oil boom. In spite of the expert analysis he performs, Indonesia is not the aim of his study. Rather he uses the analysis in order to demonstrate a particular method of data organization by means of the Indonesian example. In this sense the emphasis is on the theory of accounting.

The thrust of the theory is well captured in the title, economic development and social change. Economic development stands in contrast, at least the way I read it, to economic growth, the latter being the focus of traditional national accounts. Social change lies outside the SNA altogether; hence accounting for it is a second, novel thrust. While the application to Indonesia seems accidental at first, the example is well taken, because economic development and social change have driven this country considerably in the past decades, and being a foreign country to most readers the application avoids unnecessary controversies about effective economic policy. One learns about a new country while reading rather than wishing to argue with the author over old economic issues, which would undoubtedly be the case if a more central country to the world economy had been the example.

Hence, although over a hundred extensive tables ornate the book with data about the Indonesian economy and society, this is not the purpose of the book. In order to understand the true purpose we must first learn what is a SAM, and what is a SESAME. "The" SNA has a clear definition—there is one and only one System of National Accounts, and if you register just one transaction differently it is not the system any more. [The European version, being legally binding to all member countries of the Union certainly claims this unique validity to the letter.] Neither SAM nor SESAME are unique products in this sense. One should rather understand them as processes in the compilation of data, guided by a certain idea of integration.

The SAM (Social Accounting Matrix) has already been included in the 1993 SNA as a proposition. Thus it is not foreign to the SNA, nor is it an alteration that would invalidate it. It is an accounting device emphasizing two concepts, one of structure and one of content. In terms of structure the SAM prefers a matrix representation of accounting data over presentation in T-accounts (ingoings and outgoings side by side) or F-accounts (all outgoings under all ingoings), the traditional formats of accounting. In terms of content, a SAM details population and households and the consumptive side of an economy in similar efforts as the productive side (industries, sectors, etc.), showing the distributional effects of economic policy together with those of allocation. Neither of these purposes is counter the SNA, as one would normally see it, but they certainly transcend it.

SESAME, System of Economic and Social Accounting Matrices and Extensions, a genuine invention of Keuning's, goes a step further, by including and integrating non-monetary data in the national accounts, when these have been developed into a SAM. Matrix presentation of accounts and detailing of the consumptive sector turn out to be just the premises required for finding ways of attaching environmental and social data in a natural way. The book is essentially about how this integration is achieved, and while it is not easy reading, a reader who lets himself be guided through the whole of the subject matter will in the end be convinced.

The word "system" in SESAME is not to be understood in the rigorous SNA sense. The author himself puts the word in plural, speaking about "SESAMEs" as being suited for use in a macroeconomics teaching course. All of this is still in the making, conceptually, and if the territory of national accounts is fairly well-known by now, here is land to discover for those who like adventures. What an adventure must it have been to construct the full SESAME for Indonesia! The tables are overwhelming in their detail and comprehensiveness, but with a little input–output experience in mind one cannot refrain from asking oneself about the truth, the reliability, and the meaning of some of the detail shown. Is it more than the result of a scaling or fitting procedure? Does scarcity of data perhaps allow imputations that would otherwise be muddled in existing and contradictory data? Keuning seems to be aware of the question, but he leaves it to the reader to determine the limits of such macro accounting.

When presenting a SAM, everyone runs into the same dilemma: it is not made for a sheet of paper. If you draw SAM for illustration it is either too small to be meaningful, or too big to be comprehended. This stands in contrast to the traditional account, which can be vizualised, for a single establishment as a sort of profit and loss statement in the same way as for the economy as a whole. It may be the lack of illustrativeness that stands in the way of general acceptance of this approach, since the concept itself is as old as the national accounts and as dignified. Stone used matrix representation in his contribution to the 1968 SNA, but the famous Table II.1, unfolding from the volume in the hands of the surprised reader, never found its way into national statistical offices. Pyatt, Thornbecke, Round, and last but not least Keuning have pursued and advocated the approach. What is so intriguing about it, in spite of its apparent cumbersome nature?

The matrix format has its root in what to every accountant is known as the commodity flow method. The matrix format develops and perfects the idea inherent in this approach carrying it to its abstract completeness. The commodity flow method is well accepted as a powerful method even under extreme conditions of data poverty or contradiction, because it incorporates an arithmetic control. You can never decide on one item alone, but only in connection with its complementary item. If you have a data source concerning a certain value of production you cannot enter it into the national accounts without deciding what use is made of the production. "Double entry" is the loose term for the method, but double entry holds for any accounting. The point in national accounting is that the control is applied to the kind of transaction. All production of copper wire must equal all use; all output in appendix operations must be consumed by somebody, etc. The technique of commodity flow was further developed into compilation of input–output tables (make and use matrices), and a SAM extends the same principle to all other transactions.

The matrix format is more general than the T-account. Every T-account can be transformed into a matrix, but not the other way around. A special advantage of the more general formalism is flexibility in classification. T-accounts can accommodate two classifications, one for the units of observation, the other for the kind of transaction, which they cross. A matrix format enables the use of more than one classification for each side. Thus it is possible to switch from establishment basis to institutional units between the production and the distribution accounts, thus assigning the appropriate unit of classification to each account. The prerequisite for the realization of this format is, of course, that the necessary data for compiling transition tables mapping one classification into the other are available.

Detailing the social dimension of the economic process is the second feature of a SAM. This could be done with T-accounts also, of course, but given the flexibility in units characteristic for matrix representation it is easier to do so within a matrix format. "A further elaboration of the generation and allocation of primary income account is the most distinguishing feature of a SAM" (Keuning). Concerning labour input, for example, employed persons are the relevant statistical units that receive wages and salaries in the generation of income account and distribute them to their households in the Allocation of Primary Income Account. In this way the linkages between production and income distribution are highlighted. Also detailed data on employment can be linked to this scheme, by way of SESAME.

The advantage of an intricate linkage of production flows to distributional transactions is demonstrated by the author's impressive analysis of Indonesian development, based on the SAMs for 1975 and 1980. The author follows the effects of the oil price hike (+26 percent per year) through the Indonesian economy. He sees how the real side of the economy was driven by the price shock as "a real growth engine" and how the general price level was contained through state subsidies on oil products paid for by the government out of its surging oil revenues. Observing that under these conditions the oil industry experienced a productivity loss, he looks into the 5 different components explaining why real labour income grew by 8.8 percent annually, while at the same time income inequality increased. Rural and urban elite realised by far the highest increments in living standard, while the agricultural subgroups and the economically inactive fell behind. It is a picture resembling a Pieter van Breughel painting in its vividness and colours of description.

Enter SESAME. This is the extension of a SAM into further dimensions of non-monetary macro-indicators. It applies the basic ideas of national accounts to a wider set of data. The national accounts provide an integrated and systematic account of an economy at the meso-level from which key economic indicators at the macro-level are derived. SESAME extends this principle to social and environmental accounts. The question is which data or indicators to select. For Indonesia Keuning selects 7 main and 12 supplementary indicators. The first group includes, for example, per capita daily calorie intake in the poorest of ten household groups, average number of years of schooling of the potential labour force, Gini coefficient of per capita net adjusted disposable income. The second group includes population, employment, and labour income share. Why the distinction is made between the two groups is not clear. No environmental indicator is mentioned. While the exact list of such indicators should be tailored to national circumstances and needs as a long run goal, Keuning envisages a standard subset for the sake of international comparison.

A fact worth mentioning is not so much the concrete list as the way in which the specific indicators have been integrated in the statistical framework. Table IV.1 meticulously annotates the underlying tables of detailed data from which the macro-indicator is derived. The reader can check even the Gini-coefficient from the assigned source. Keuning not only calls for integration but also demonstrates it *in vivo*.

Two other issues need to be mentioned. One is a new way of accounting for capital input in production, and the other is the fully fledged decomposition of SAM and SESAME into price and volume changes executed without regard for the conceptual distinction between "real" changes and "volume" changes of value flows as elaborated in the SNA. Both issues are technically intricate, not really related to the matrix accounting approach, while touching, at the same time, on difficult problems of value theory that does not belong here. Let it be said that while they are not as whole-heartedly supported by this author as the approach in general, the treatment of these issues pays witness to the creative imagination of the author that shines through the whole study, witnessing a man's long intellectual journey into and through the national accounts.

Beyond the SNA—whither? Having studied the two books, I might answer as follows. If the national accounts were to be invented from scratch now, they would probably be formatted in a SAM. We would prefer the abstract matrix format to illustrative T-accounts, because it can grasp the circuit of economic value in all its transformations and variations. Historically, we have started from the simple element; business accounts, and for this reason switching to matrix format is difficult. Yet, as concerns the 21st century, I join Keuning in the assessment that SESAME might well be the proper orientation for developing the method of national accounting, at least in theory. Concerning distributional issues, the question is more political. As has been pointed out before (Reich, Sonntag, Holub, 1977), in detailing industry at the expense of households, capital formation and finance at the expense of consumption and distribution, the national accounts fall prone to a capitalist view of society. They generate the impression that society is in order when, and as long as, the circulation of capital functions well. Whether the reproduction of "human capital" (or reproduction of the population and its labour force as I would prefer to say) is accounted for is decided less by statisticians than by parliaments allocating means to the necessary surveys. Hopefully, a new century may also develop a new view here. Physical indicators, concerning environment, in particular, have not been tested in Keuning's study reviewed here, although at other instances they have as reported by the author. The UN System of Integrated Economic and Environmental Accounts addresses the issue, in particular, and is also documented in the 1993 SNA. One would like to compare it to the SESAME concept, to which it is similar, in many ways. But this we leave to the 21st century as well.

Baldwin and his colleague's study implicitly proves that the SNA is prepared, conceptually, to cope with our ever-changing world as far as international production is concerned. Keuning's study corroborates this finding, in that SAM and SESAME start from the given SNA, taking its definitions and classification as groundwork for describing a national economy. Both studies together form a beautiful document of where we stand at present in the art of national accounting.

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Reference

Reich, U.-P., P. Sonntag, and H.-W. Holub, *Arbeit-Konsum-Rechnung. Kritik und Erweiterung der Volkswirtschaftlichen Gesamtrechnung*, Bund-Verlag, Köln, 1977.

INTERNATIONAL ASSOCIATION FOR RESEARCH IN INCOME AND WEALTH

26th General Conference—Cracow, Poland

27 August to 2 September 2000

TENTATIVE PROGRAM AS OF 1 DECEMBER 1999

N.B. This is a tentative program. A maximum of 6 papers will be discussed in each session. Additional accepted papers will be Contributed Papers and will be distributed, but not discussed in the main session. Session Organizers have the option to arrange an evening session for the Contributed Papers or the Author of the Contributed Paper may apply to the Contributed Papers Session Organizer for approval to present the paper in the Contributed Papers Session on Friday afternoon.

MONDAY, 28 AUGUST, MORNING:

Session 1 Factor Productivity and Technological Change

Organizer: Barbara Kondrat, GUS, Warsaw, Poland

1. "On Technical Change and the Measurement of Productivity,"
   Michael Wolfson and Dajin Li, Statistics Canada
2. "Labour and Capital Productivity in Poland,"
   Leszck Zienkowski, Research Centre for Statistical and Economic Analysis, Poland
3. "On Capital and Productivity: Harrodian and Keynesian Measures,"
   Tom Rymes, Carlton University, Canada
4. "Capital Formation and Total Factor Productivity in South Korea and Taiwan, 1957–98,"
   Bart van Ark and Marcel Timmer, University of Groningen, Netherlands.
5. "Contribution of Information and Communication Technology on Current and Productivity Growth,"
   Paul Schreyer, OECD, France

Discussants:
Ian Steedman, MMU, U.K.
Mary O'Mahony, NIESR, U.K.

MONDAY, 28 AUGUST, AFTERNOON:

Session 2A Economic Performance and Income Distribution

Organizer: Thesia Garner, Bureau of Labor Statistics, Washington, DC, U.S.A.

1. "Growth, Income Distribution, and Well-Being in a Comparative Perspective,"
   Stephan Klasen and Carola Grün, University of Munich, Germany
2. "Inequality, Growth and Welfare: An International Comparison,"
   Luis Ayala, University of Castilla-La Mancha, Spain and Jesús Ruiz-Huerta, University Complutense, Spain
3. "Risk, Wealth, and the Welfare State,"
   Edward Bird, University of Rochester, U.S.A.
4. "When is Growth Pro-Poor? Evidence from the Diverse Experience of India's States,"
   Martin Ravallion and Gaurav Datt, The World Bank, U.S.A.
5. "Economic Performance and the Distribution of Income in Germany Before and After the Wall Came Down,"
   John A. Bishop, East Carolina University, U.S.A., John P. Formby, University of Alabama, U.S.A. and Lester A. Zeager, East Carolina University, U.S.A.
6. The Development of Slovak Income Distribution During the Transformation (1988–96),"
   Ratislav Bednarik, Bratislava, Slovakia

Discussants:
Lars Osberg, Dalhousie University, Canada
Irwin Collier, Freie Universitat Berlin, Germany

Session 2B Balance Sheets

Organizer: François Lequiller, INSEE, France

1. "The Asset Boundary in SNA 93: Should We Extend the Current Definition?"
   P. J. M. Van de Ven, Statistics Netherlands, Netherlands
2. "Recent Implementation, Conceptual and Practical Problems in the New SNA 93 Balance Sheets for the U.K.,"
   Paul West, ONS, U.K.
3. "A Comparison of PIM Estimates with Direct Stock Information on Buildings,"
   Esben Dalgaard and Annette Thomsen, Statistics Denmark, Denmark
4. "Uncertainty in Financial Balance Sheet Data in the National Accounts,"
   Michael Osterwald-Lenum, Statistics Denmark, Denmark
5. "The Theory of Economic Depreciation and the SNA,"
   Peter Hill, U.K.
6. "Interpreting the Balance Sheets,"
   Peter Harper *et al.*, ABS, Australia

Discussants:
To Be Announced

MONDAY, 28 AUGUST, EVENING:

Session 2A Continued Economic Performance and Income Distribution Organizer: Thesia Garner, Bureau of Labor Statistics, Washington, DC, U.S.A.

Program To Be Announced

TUESDAY, 29 AUGUST, MORNING:

Session 3 International Standards for Income Distribution Statistics
Organizer: Paul van der Laan, Statistics Netherlands, Netherlands

1. "Overview of the Proposed Standards for Income Distribution Statistics," Maureen McDonald, ABS, Australia, Pieter Everaers, Eurostat, Luxembourg, and Daniel Weinberg, Bureau of the Census, U.S.A.
2. "Linking Micro and Macro Statistics on Household Income and Expenditure,"
   Anne Harrison, OECD, France, Judith Archibald, Statistics New Zealand, New Zealand, and Tim Harris, ONS, U.K.
3. "Income Distribution Data: Issues and Concerns for Economic Development,"
   Pedro Saínz, ECLAC, Chile and Sylvester Young, ILO, Switzerland
4. "Making Cross-Country Comparisons of Income Distributions,"
   Timothy Smeeding, Syracuse University, U.S.A., Ian Castles, Academy of Social Sciences in Australia, Australia, Michael Ward and Haeduck Lee, World Bank, U.S.A.
5. "Trend Data for the Distribution of Income,"
   Tony Atkinson, Nuffield College, U.K., Andrea Brandolini, Bank of Italy, Italy, and Timothy Smeeding, Syracuse University, U.S.A.
6. "Potentials and Problems of Longitudinal Income Data,"
   Gert Wagner, German Institute for Economic Research, Germany, Jon Epland, Statistics Norway, and Veli-Matti Törmälehto, Statistics Finland, Finland

Discussants:
To Be Announced

Contributed Paper:
"The International Expert Group on Household Income Statistics (Canberra Group), 1996–2000,"
Paul van der Laan, Statistics Netherlands, Netherlands

TUESDAY, 29 AUGUST, AFTERNOON:

Session 4A Environmental Accounting

Organizer: Anne Harrison, OECD, France

This session will be used to review the draft of the revised "Integrated Environmental and Economic Accounting Manual (SEEA-2000)" being prepared by the

London Group on Environmental Accounting. The new manual will include six chapters.

1. Introduction and overview
2. Asset accounts
3. Flow accounts
4. Environmental protection expenditure
5. Valuation and economic integration
6. Policy uses and applications

Drafts of these chapters will be available at the end of August to IARIW Members and those attending the Cracow meeting. The discussion of the draft will be introduced (with written, pre-circulated) comments by:

Keith Blackburn, IMF, U.S.A.
Utz Reich, Fachhochschule Mainz, Germany
André Vanoli, INSEE, France

After floor discussion, several authors of the chapters will respond:

Alessandra Alfieri, UNSD, U.S.A.
Mark de Haan, Statistics Netherlands, Netherlands
Ole Gravgaard, Statistics Denmark, Denmark
Robert Smith, Statistics Canada, Canada
Knut Sorensen, Statistics Norway, Norway

Session 4B Household Budget Expenditures and Budget Standards

Organizer: David Johnson, Bureau of Labor Statistics, U.S.A.

1. "Progress on Child Poverty? Recent Changes in Canadian Policies and Outcomes,"
   Thomas F. Crossley, The Australian National University, Australia and Lori Curtis, Dalhousie University, Canada
2. "Do Economies of Size in Household Consumption Matter in Belarus?"
   Anna Ivanova, University of Wisconsin-Madison, U.S.A. and Alberto Martini, Universita del Piemonte Orientale, Italy
3. "Seventy-Five Years of Family Budgets in the United States,"
   David Johnson, Rob Cage and John Rogers, Bureau of Labor Statistics, U.S.A.
4. "Using Expenditure Data in the Measurement of Poverty: A Comparison of Australia and the U.K.,"
   Peter Saunders, SPRC UNSW, Australia, Jonathan Bradshaw and Michael Hirst, University of York, U.K.

Discussants:
To Be Announced

WEDNESDAY, 30 AUGUST:

Full Day Excursion comprising a raft trip down the Dunajec River with views of a dramatic river canyon and valley and a visit to the Wieliczka Salt Mine, a working mine since the late 12th century.

THURSDAY, 31 AUGUST, MORNING:

Session 5 Measures of Economic Well-Being

Organizer: Andrew Sharpe, Centre for the Study of Living Standards, Canada

1. "Sustaining Economic Well-Being: New Estimates of the Genuine Saving Indicator,"
   Kirk Hamilton, World Bank, U.S.A.
2. "Time and Economic Well-Being: A Panel Analysis of Desired Versus Actual Working Hours,"
   Joachim Merz, University of Luneburg, Germany
3. "The European System of Social Indicators: An Instrument for Social Monitoring and Reporting,"
   Heinz-Herbert Noll, Centre for Survey Research and Methodology, Germany
4. "Estimates of an Index of Economic Well-Being for OECD Countries,"
   Lars Osberg, Dalhousie University, Canada and Andrew Sharpe, Centre for the Study of Living Standards, Canada

Discussant:
Thesia Garner, Bureau of Labor Statistics, U.S.A.

THURSDAY, 31 AUGUST, AFTERNOON:

Session 6A Measures of Poverty and Social Exclusion

Organizer: Stephen Jenkins, Institute for Social and Economic Research, U.K.

1. "Measuring Well-Being in the Functioning Space,"
   Andrea Brandolini, Bank of Italy, Italy
2. "Identifying Groups at High Risk of Social Exclusion: Evidence from the ECHP,"
   Panos Tsakloglou and Fotis Papadopoulos, Athens University of Economics and Business, Greece
3. "The Social Exclusion of Children in North America: A Microdata Comparison of Canada and the United States,"
   Shelley Phipps and Lori Curtis, Dalhousie University, Canada
4. "Explorations of the Relationship Between Poverty and Social Exclusion in Britain,"
   Jonathan Bradshaw, David Gordon, Sue Middleton, Peter Townsend, Christina Pantazis, Ruth Levitas, Sarah Payne, Glen Bramley, Universities of York, Bristol, Loughborough, Strathclyde, U.K.
5. "Income, Multiple Deprivation and Poverty,"
   Rosa Martinez and Jesús Ruiz-Huerta, Universidad Complutense, Spain
6. "Vulnerability and the Dynamics of Poverty in Rural China,"
   Neil McCulloch, University of Sussex, U.K.

Discussants:
To Be Announced

Session 6B Measurement of Government and Other Non-Profit Institutions

Organizer: Edith Archambault, University of Paris 1—Sorbonne, France

1. "Measurement of Government and Other NPI in Developing Countries,"
   Markos J. Mamalakis, University of Wisconsin-Milwaukee, U.S.A.
2. "Measure of Government in the Netherlands,"
   Fritz Bos, Statistics Netherlands, Netherlands
3. "The Handbook on Non-Profit Institutions in the System of National Accounts: An Introduction and Overview,"
   Helen Tice, Bureau of Labor Statistics (Retired), U.S.A.
4. "Measuring the Contribution and Performance of the Non-Profit Sector: What are the Issues?"
   Helmut Anheier, London School of Economics, U.K. and Lester Salamon, Johns Hopkins University, U.S.A.
5. "Social and Economic Size of Italian Voluntary Organizations,"
   Nereo Zamaro, ISTAT, Italy

Discussants:
To Be Announced

THURSDAY, 31 AUGUST, EVENING:

Session 6A Continued Measures of Poverty and Social Exclusion

Organizer: Stephen Jenkins, Institute for Social and Economic Research, U.K.

1. "Measuring Childhood Poverty: One Poverty or Many?"
   Sue Middleton, Jules Shropshire and Karl Ashworth, University of Loughborough, U.K.
2. "Measurement of Poverty Using Alternative Measures of Income and Resources: A North American Perspective,"
   Patricia Ruggles, Department of Health and Human Services, U.S.A.
3. "Applying the Irish National Definition of Poverty Across 12 European Union Countries: The Structure and Determinants of Low Income and Deprivation,"
   Richard Layte, Brian Nolan, and Chris Whelan, Economic and Social Research Institute, Ireland
4. "The Distribution of Welfare and Its Relation to Poverty and Inequality,"
   Stanislaw Maciej Kot, Cracow University of Economics, Poland
5. "Theoretical Definition and Empirical Measurement of Welfare and Poverty: A Microeconomic Approach,"
   Wolfgang Strengmann-Kuhn, Institut Für Volkswirtschaftslehre, Germany
6. "Using Subjective Information to Correct Biases in Deprivation Indices,"
   Karel Van den Bosch, University of Antwerp, Belgium

Discussants:
To Be Announced

FRIDAY, 1 SEPTEMBER, MORNING:

Session 7A Construction and Use of Social Accounting Matrices

Organizer: Steven Keuning, Statistics Netherlands, Netherlands

1. "A Time-Series of Social Accounting Matrices for Indonesia,"
   Kusmadi Saleh, Central Bureau of Statistics, Indonesia
2. "A Pilot Social Accounting Matrix for Italy with a Focus on Households,"
   Alessandra Colli, ISTAT, Italy
3. "Preparing Social Accounting Matrices and Labour Accounts—The First Steps,"
   Amanda Rowlatt and Marta Haworth, ONS, U.K.
4. "The Use of Social Accounting Matrices in Modeling,"
   Erik Thorbecke, Cornell University, U.S.A.
5. "SAMs and Data Construction for the AGE-Model of the Netherlands Bureau of Economic Policy Analysis (CPB),"
   Ate Nieuwenhuis and Ted Reininga, Netherlands Bureau of Economic Policy Analysis, Netherlands
6. "SAM Multipliers and the Measurement of Inequality,"
   María Theresa Rubio Sanz and Juan Vicente Perdiz, Valladolid University, Spain

Discussants:
Brian Newson, Eurostat, Luxembourg
Christina Hannig, UNSD, U.S.A.
Graham Pyatt, Institute of Social Studies, The Hague, Netherlands

Session 7B Selected Contributed Papers

Organizer: Lars Osberg, Dalhousie University, Canada

This session will be comprised of papers selected by the *Review* Book Editor and Managing Editor from the Contributed Papers Session. In this session, the papers will be presented by discussants following the format of the invited sessions.

FRIDAY, 1 SEPTEMBER, AFTERNOON:

Session 8B Contributed Papers

Organizer: Edward Wolff, New York University, U.S.A.

Group 1: Topics in National and Historical Accounting and Productivity Comparisons

1, "National Accounts in a Time Series Perspective,"
   T. M. Mathiasen and M. Petersen, Statistics Denmark, Denmark
2. "National Accounting for Electronic Commerce and Intelligent Software Agents,"
   Harry Postner, Canada
3. "How to Treat Employee Stock Options and Associated Buyback Programs in the National Accounts,"
   Harry Postner, Canada

4. “Mark-Up Rate Fluctuations in the Business Cycle: A Kaleckian View,”
   Mitsuhiko Iyoda, St. Andrews University, Japan
5. “Additivity, Matrix Consistency and a New Method for International Comparisons of Real Incomes and Purchasing Power Parities,”
   Itsuo Sakuma, Senshu University, Japan, D. S. Prasada Rao, University of New England, Australia, and Yoshimasha Kurabayashi, Toyo Eiwa University, Japan

Group 2: Issues in Income Distribution

1. “The Impact of Housing Values on the Wealth of Australians: A. D.ynamic Microsimulation of 1986–2036,”
   Simon Kelly, University of Canberra, Australia
2. “Making a Difference: The Impact of Tax/Transfer Policy on Child Poverty in Australia, 1982 to 1996–97,”
   Ann Harding and Aggie Szukalska, NATSEM, Australia
3. “The Distribution of Fringe Benefits: The Case of Norway,”
   Mads Ivar Kirkeberg and Jon Epland, Statistics, Norway, Norway
4. “Intergenerational Influences on the Receipt of Unemployment Insurance in Canada and Sweden,”
   Miles Corak, Statistics Canada, Bjorn Gustafsson and Torun Osterberg, University of Goteborg, Sweden

TRAVEL GRANT
for the
IARIW 26th GENERAL CONFERENCE IN CRACOW, POLAND
27 August–2 September 2000

The *Nancy Ruggles Memorial Fund* provides a grant for one person to attend the General Conference of the International Association for Research in Income and Wealth. The next conference will be held in Cracow, Poland, 27 August through 2 September 2000. The grant will be awarded competitively on the basis of a paper judged by the Trustees of the Fund.

Applicants for the grant should:

* Submit to the IARIW Secretariat an unpublished single author original paper on a subject relevant to the interests of the Association. (See the inside cover page of the *Review* for the address and a description of the Association's fields of interest.) A C.V. should accompany the paper. The deadline for paper submissions is February 15, 2000.

* Be working, on a permanent basis, in a country outside Western Europe, North America, Japan, Australia and New Zealand.

* Be under 35 years old.

The grant is intended to contribute to the cost of airfare, conference fees and hotel accommodation up to a limit of U.S. $2,500. The successful applicant will be expected to present his, or her, paper at the Conference.

Blades Chadeau Reich Smeeding
Trustees of the Nancy Memorial Fund